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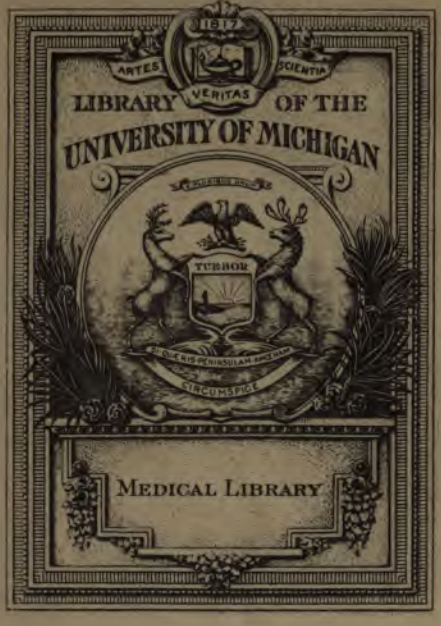
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THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY:

EDITED BY

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THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY.

JANUARY, 1851.

ART. I.—*Clinical Observations in Private Practice.* By Dr. E. B. HASKINS, of Clarksville, Tenn.

"All is not then obscure or uncertain in medicine when the observations which guide us are exact."—*Louis.*

"To accuracy of observation appertain practice of the senses, an acquaintance with the terms of art, full attention to the subject, freedom from preconceived opinions, and a willingness to speak the truth."—*Schill.*

Observations made in private practice undoubtedly possess as much value, *other things being equal*, as those made in public institutions. But as *other things* are *not* equal, it may not be amiss to notice, in this preliminary, some of the more salient points wherein the want of equality consists.

1. In private practice, and particulorly in the country, the physician has a different nurse for nearly every patient, and therefore, nurses of every degree of experience and grade of capacity, have to be relied upon for

statements of what occurs in the *interim* of visits; hence, great circumspection is necessary on the part of the practitioner to obtain *trustworthy* information. Indeed many cases, otherwise of great interest, are rendered valueless on account of the ignorance of those in constant attendance. Besides, the *treatment* is often simplified to a fault, by reason of the danger of confiding too many provisions to the understanding and judgment of ignorant attendants.

2. In private practice, that freedom with the *person* of female patients, particularly of rank and fashion, in the various steps of an examination that accuracy demands, would often be regarded as indelicate and officious, except in very grave and alarming cases.

Napoleon on few occasions displayed more sagacity and wisdom than when he said to M. Dubois, on being informed of the critical condition of Maria Louisa in her accouchement, "go back to the Empress's chanber, and treat her as you would a baker's wife.

3. The distance from one patient to another is such as to require the physician so to encumber himself with instruments of diagnosis, therapeutical appliances, notebook, etc., as to force him often to forego the advantages derived therefrom.

4. The number of cases of any one disease, properly circumstanced for reliable record, is seldom sufficiently large, in private practice, to furnish data for the deduction of any law in pathology, or the demonstration of the efficacy of any method of treatment.

5. Post-mortem dissections can rarely be pursued to any very valuable extent in private practice. The subjects allowed the physician for examination are, at best, but few, and with these, the time allowed is generally too short to make other than hurried and imperfect examinations. The track of the alimentary canal and spinal marrow, can seldom be inspected at all under such circumstances.

On reviewing the difficulties and embarrassments here enumerated, that do not exist in hospital practice, it can hardly be wondered at that Dr. James Jackson, thirty years after seriously contemplating the plan of recording his observations, and providing himself with printed blanks for his cases, should make the public acknowledgment that "the difficulties attending the plan in private practice discouraged me [him] too soon." (See Preface to Louis on Bloodletting.)

It should not be overlooked, on the other hand, that observations made in private practice possess, in some particulars, a value that does not belong to those made in public institutions.

1. In hospitals, many patients enter from a distance, and, therefore, the predisposing, exciting, and modifying influences that have surrounded them cannot be accurately learned, either on account of ignorance, want of veracity, or the state of mind induced by disease. In private practice, on the contrary, family temperaments and predispositions can be ascertained; individual habits successfully inquired into; local and domestic causes examined—in a word, every thing may be learned that is necessary to a full history of each particular case.

2. In large metropolitan hospitals, there are *peculiar* influences, that so impress and alter the natural aspect and course of disease, as to render observations made therein false types of disease generally, as well as fallacious and unsafe guides in general practice.

That the difficulties attending private practice may be so far overcome, by persevering industry, as to enable the practitioner to record his more interesting cases in such a manner as to benefit himself, will not be argued here, as no one will, for a moment, doubt such a proposition. It may not, however, be so readily granted, that their *publication*, amidst such a tide of hospital reports as flows through the medical periodical press at present, can,

in any appreciable degree, advance the interest of medicine. Yet it will hardly be denied that whatever is of *individual*, may be of *general*, interest—that if it be useful to the individual practitioner to record his cases for the assistance of his own memory, and thus *acquire the largest amount of experience in the shortest possible time*, that, therefore, the same benefits will accrue to others who may avail themselves of such experience. The same rule holds in this case as that of hospital practice; with this difference, however, as regards their relative *importance*,—the private practitioner must content himself with an humbler, though no less responsible, share of clinical literature. Instead of aspiring to govern professional opinion by extensive monographs of special observations, he must content himself with furnishing such scattered materials as fall within the scope of his more diffuse labors; instead of essaying to erect a temple to his own fame, he must be satisfied with a *niche* in the great common temple, of which he can but act as an humble co-builder. To this subordinate end, however, it can not be disguised, that industry, honesty, and capability are absolutely essential—without these requisites, clinical reports are mere trash, that only clog the literature, and embarrass the science of the profession, without the possibility of giving other than a brief notoriety to the author.

With this hasty exposition, then, of my sense of the comparative insignificance of my sphere of practical researches, as well as my responsibility to a rigid and jealous profession, I proceed to publish such observations as I have made at the bed-side, that present to my mind points of more or less practical interest.

OBSERVATION I.

A case of Phlegmasia Dolens, treated locally with tinct. iodine—complete cure.—Mrs. S——, aged 30 years, of leu-

cophlegmatic temperament, was brought to bed of her sixth accouchement on the evening of the 4th of December 1847; birth easy and natural. About the sixth month of the next preceding gestation, she suffered a premature delivery. Near the same period of her last gestation, she was attacked with remittent fever, and had quite an irritable stomach. The remittent fever passed into an intermittent fever, which lasted a few weeks and terminated in health.

From the time of accouchement (4th) up to the 12th, the patient did well, except a slight headache on the 11th, for which a dose of castor-oil was ordered, (the bowels being confined). The oil was not taken until the 12th, when she felt quite well; sat up, and had appetite. The oil produced one copious dejection at night.

During night of the 12th, patient had slight shivering sensations, with wandering pains in the hypogastric region.

13th. *Morning.* Complains of chilliness; pain and soreness of bowels; no swelling; countenance distressed; tongue furred; no headache; some thirst; feeling of lassitude; pulse 100, and soft.

Evening visit. Pain has fixed itself suddenly in the left hip and groin, extending down left thigh, with inability to move the leg; no swelling; tongue foul and clammy; pulse 107, and soft. Calomel, grs. v, Dover's powder ℈ss, to be taken at night; a lotion of spt. camph., spt. ammon. and spt. terebinth, of each one part, laudanum two parts, to be applied, and limb enveloped in flannel.

14th. *Morning visit.* Slept but little during night; tongue foul and clammy; pulse 118 and soft; skin dry, and temperature natural; bowels not moved; limb swelling below the knee; greatest pain and tenderness in calf; anorexia; no lochia; milk suppressed. Two teaspoonfuls of sulph. mag. in half tumbler of water until bowels act; tinct. of iodine applied to limb from groin to ankle, with

a soft shaving brush; lemonade; diet light. *Afternoon.* Pulse 130, full and soft; thirst; nausea; pain not so great, but confined to calf, swelling increases upwards, embracing the thigh; no action from bowels. Injections of salts and senna tea at short intervals until bowels act; lemonade for drink; light diet.

15th. *Morning.* Enemata produced free evacuation of bowels during night, after which ¼ gr. sul. morph. was given; patient slept but little; pulse 118, soft, with good volume; feeling of great debility; sick stomach; thirst; clammy tongue; urine sparce, and depositing lateritious sediment; leg less painful and tender, has not increased in size, but swelling extends from hip to ankle. Renewed application of tinct. of iodine; ℈ss. of nitrate of potass dissolved in a pint of lemonade, to be drank in course of the day; wine whey allowed for diet. *Evening.* Pulse 135, soft, and good volume; less nausea; thirst; tongue clammy; some headache; urine increased in quantity.—Lemonade.

16th. *Morning.* Pulse 118 and soft; rested well during night; less thirst; leg and thigh less painful, and swelling not increased; urine more abundant. Twenty drops of spts. nitre in ℥ij. of parsley-root tea every two hours; renewed application of tinct. iodine to limb. *Evening.* Pulse 112; less thirst; slight soreness of abdomen; urine sparce and muddy; leg not examined. Spts. nitre and tea continued; hot wilted tanzy to belly.

17th. Pulse 107, and soft; tongue moist; no thirst; limb less painful and slightly reduced in size; urine increased, and less muddy; two or three small dejections; abdomen less sore. Solution of cream tartar and spts. nitre every two hours; reapplication of tinct. of iodine. *Evening.* Pulse 112; tongue moist, and cleaning; leg painful, but not increased in size or tenderness; urine increased and less muddy. Cream tart. and spts. nitre continued—lemonade allowed.

18th. *Morning.* Slept but little last night on account of pain in swelled limb; otherwise feels well; pulse 105; some perspiration last night; tongue moist, and cleaning; appetite returning; countenance cheerful; bowels open; no tenderness of abdomen; urine natural in quantity and quality. Cream tartar and spts. nitre; reapplication of iodine tinct., with bottles, filled with hot water, to leg when painful. *Evening.* Pulse 112; burning sensation over the skin of affected limb; (owing to desquammation having taken place the iodine irritates the recently formed cuticle;) other symptoms as in morning.—Cream tartar and spts. nitre; application of cool cream to surface of leg and thigh.

19th. *Morning.* Pulse 108; feels well; slept well over night; swelling subsiding in upper part of limb, but slightly increased in ankle. Cream tartar and spts. nitre; wilted cabbage leaves* to limb. From this date the pulse rapidly reduced in frequency, and the limb, in equal ratio, in size from above downward, with other symptoms of returning health—leaving the foot and ankle edematous, (which soon yielded to moderate pressure by a flannel roller) and by the middle of January, 1848, patient was enabled to walk any where with ease, without assistance.

This case was a radical cure. The subject has borne another offspring without any return of symptoms The limb remains perfectly well, without swelling or stiffness. Another case treated on the same plan, by my suggestion, also yielded promptly to the treatment, and remains well.

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* Few western practitioners but understand the soothing influence of cabbage leaves to irrirated surfaces. It seems to have taken the place of cerates, in the country, as an after dressing to blistered surfaces. Was the practice introduced by old women? or by the country surgeon who found it more convenient than to carry cerates with him? There is a popular belief that one side of the leaf draws or keeps the blister open, whilst the other side heals!

It will be remembered that Mr. John Davies, Surgeon to the General Infirmary at Hartford, has, in an elaborate paper,* insisted upon the efficacy of tinct. of iodine, topically applied in local inflammations generally, with or without fever. I have long been acquainted with its potency over local swellings and inflammations, unaccompanied by fever, but the above case would seem to entitle this remedy to some consideration as a *revulsive* in the acute phlegmasiæ. The tinct. I used was prepared according to the U. S. formula (Iodine ℥j; alcohol Oj.) diluted so as *just not to vesicate.* My notes do not inform me of the condition of the crural vein. I presume it was not found hard and corded; yet the omission was none the less an oversight, as the absence of important symptoms should always be noticed—*negative* symptoms being, often, as important as positive ones.

OBSERVATION II.

A case of Puerperal Peritonitis—its accession simulating after pains—death—post mortem examination.—

Feb. 18th, 1848.—Negress, aged about 28 years, the property of Dr. D., was delivered on the 14th inst. of her second child, which was vigorous and healthy at birth, but died on the 3d day from hemorrhage of the umbilicus. Accouchement by an old negress who delivered the patient sitting; parturition attended with no unusual circumstances, except the complaint of "cramping in the stomach" immediately after delivery, which was promptly relieved by a dose of laudanum. Dr. D. informs me that on the 15th and 16th, other anodynes were given for what he took to be after pains, being intermittent in their character.

On this morning (18th) finding the abdomen swollen and tender to pressure, Dr. D. opened a vein and drew

*This paper was republished in 1839, in Dunglison's Amer. Med. Lib.

about four ounces of blood, being detered from further depletion on account of approaching syncope.

Half past 8 o'clock, P. M.—Decubitus mostly dorsal with knees flexed, sometimes left lateral with flexed limbs, and belly thrust forward; pulse 145 and feeble; skin cool and dry, (and has been from beginning of disease;) tongue white and slightly coated; respiration thoracic and frequent; abdomen distended and tender to firm pressure; no tenderness in groins; vagina hot and puffy; cervix uteri, in situ, body of uterus not tender, nor of unusual dimensions; bowels confined; urine natural in quantity; lochia not suppressed; no sign of lactation; occasionally vomits up a greenish matter. Venesectionto f.℥xij; calomel ℈ss; opium grs. ij; a large wheat-bran and vinegar poultice to abdomen. Stimulants were likewise used; but patient progressively declined and expired on the 19th, at 7 o'clock, A. M.

Post-mortem examination three hours after death.—On opening the abdomen, a large quantity of clear straw colored serosity flowed out; a pus-colored coagulable lymph, in flakes of various sizes, was floating amongst the intestines; the peritoneal covering of the viscera, and abdominal parietes were white and shining; the bowels were slightly adherent wherever in contact; the ovaria were as large as a hen's egg, and were entirely enveloped in a firm pus-colored lymph—when scraped off, ovaria were red and vascular; broad ligaments covered with same substance; uterus appeared about the size of a small cocoanut and firm;—the veins of this organ, and its internal membrane were not examined, for want of the *liberty to do so;*—bowels were distended with gas.

There is nothing new in the pathological anatomy of this case—nor indeed in any other respect. It may be useful, however, as another proof of the deceptive invasion often, of the most fatal maladies; and should admonish us of the importance of the strictest attention

to all abdominal and pelvic pains occurring in the puerperal woman. Dr. D. is an intelligent physician, and though he has retired from practice, is as little likely to make blunders of this sort, as hundreds of young practitioners in daily active practice.

The very exact likeness of the lymph found in the abdomen, to pus, has led me to inquire whether the pus found so often by the earlier laborers in this department of morbid anatomy may not have been coagulable lymph.

The last bleeding was certainly too late to do any thing but harm, and would not have been used but for the uncertainty of the time of attack. It was improper at any time, according to the rule laid down by Dr. Robert Lee, who says "we should not be deterred from employing the lancet because the pulse is small and contracted, provided it does not exceed 110 or 115 pulsations in the minute." In this case the pulsations were 145 in the minute.

(TO BE CONTINUED.)

LOUISVILLE, December 1850.

To the Editors of the Western Medical Journal:—

The accompanying tabular view of remedial agents was prepared by one of his pupils some years since from the Mss. of Dr. Wm. Tully of New Haven, Connecticut, and formerly Professor of Materia Medica in the Medical Institute of Yale College. Dr. Tully has been justly regarded by all who have known him as one of the most erudite and philosophical scholars in the Medical profession. Unfortunately for science he has not yet published much, (except in the department of Botany) but by his power as a teacher he has uniformly excited the zeal and profound

gratitude of all who have ever enjoyed his instructions. With a commendable spirit of liberality his very voluminous manuscripts, covering a wide range of medical and scientific learning, have always been open to his pupils. The present classification of medical agents it is believed is entirely his own, and it will, I am sure, be examined with great interest by those who make such subjects a study. Yours truly, B. S. Jr.

ART. II.—*Catalogue of inorganic substances employed in medicine, with the powers of each substance.* Prepared from the manuscripts of Dr. WM. TULLY, with a system of powers in the order and kind of their operation.

Remedial agents may be classed in three Orders according to the nature of their operation upon the human constitution. Each of the Orders will embrace as many Classes, and each Class three or more groups of powers.

ORDER I.—CLASS I.—[1]*Antiphlogistics*, "diminish vital energy and strength of action in the circulating system"—(Tully.) *Antiph.* operate suddenly, but their *effect* is lasting. [2]*Alteratives or "Adenagics" (Tully)* occasion gradual and permanent changes of action and condition in the glandular, or secernent and absorbent systems. [3]*Sedatives* or "*Neuragics*" *(Tully)* occasion slow or more rapid and permanent changes of action and condition in the nervous, and secondarily in the nutritive and circulating systems. [4]*Tonics* increase permanently, or for considerable periods of time, the active functions of organic life, circulation, digestion, &c. They restore, restrain, and augment *tone.*

CLASS II.—[1]*Diffusible stimulants*, "*Antisbestics*" *(Tully.)* Augment rapidly, but transiently, the activity of circulation and counteract *Antiphlogosis.* [2]*Narcotics* exalt, sustain, and finally *modify and suspend* the action of the nervous system of animal life. They operate second-

arily upon the *brain* and upon the nerves of digestion, circulation, &c. [3]*Exhilarants* "*Euphrenics*" (*Tully*) exalt the cerebral functions merely.

CLASS III.—[1]*Cathartics* increase downward peristaltic motion, and augment intestinal mucous secretions; (but the last is not their proper action.) [2]*Emetics* occasion an upward peristaltic movement generally sudden and transient. [3]*Sternutatories* and such agents as excite sudden and powerful action of the respiratory organs; (such are suffocating and irritating gases.)

ORDER II.—CLASS I.—[1]*Styptics* occasion a vital contraction of the organic solids, and suspend secretion from mucous surfaces. [2]*Levatics* (or demulcents) allay irritation of mucous surfaces. [3]*Dieuretics, Emmenagogues*, &c. increase particular secretions of mucous surfaces, without irritation.

CLASS II.—[1]*Rubefacients* occasion a temporary relaxation and consequent engorgement of the superficial capillaries, (Errhines and irritants used simply to promote secretion are of the same *power.*) [2]*Epispastics proper, irritate*, change organically and destroy the surface. [3]*Mechanical irritants* exalt, irritate, and finally *exhaust* the vitality of the skin and mucous membranes.

CLASS III.—[1]*Fomentations, Cataplasms, warm baths*, &c. assist, exalt and finally exhaust the organic activity of parts, or of the whole system. [2]*Cold bath*, profuse bloodletting and *shocks* of all kinds, intended to effect sudden and violent revulsions in the organic system. [3]*Regimen.*

ORDER.—REMEDIA INTELLECTUALIA.

[NOTE.—Dr. Tully classes Rubefacients, Epispastics and Mechanical irritants under one term, ORAESTHETIC. *Expectorants* as a class or Power have no existence; many medicines are used to increase expectoration *indirectly.* Sialagogues are either *rubefacient* or Alterative. "Adenagic" (Tully.)

Materia Med. Chemica.

1	Acidum,	aceticum.....	Antiph.	Neur.	Rubefacient.	
2	"	arsenicum	Ton.	Aden.	Neur. (or Sed.)	
3	"	arsenosum.....	"	"	"	
4	"	auricum.....	Neur. (or Sed.)		Aden. (or Alterative.	
5	"	boracicum.....	"	Antiph.	Oræsth. (or Irrit.)	
6	"	carbonicum.....	"	"	"	
7	"	chlorauricum....		Adenag.		
8	"	chloroferricum.....		"	Tonic.	
9	"	chlorohydrargyricum..	Neur.	"	Emet. Rubefacient.	
10	"	chlorohydrargyrosum....	"	"	Cathartic, (Calomel.)	
11	"	chlorohydricum.....	"	"	Antiph. Oræsthetic.	
12	"	chloroxynitricum.....	"	"	"	"
13	"	citricum.....	"		"	"
14	"	cyanauricum.....	"	"	Narcot.	"
15	"	cyanohydrargyricum....	"	"	"	Emetic.
16	"	cyanohydricum.....	Pure Narcotic.			
17	"	fluoboricum.....	Escarotic.		(*Oræsthetic.*)	
18	"	fluohydricum.....	"			
19	"	hypantimoniosum....	Antiph.	Emet	Cath. Neur.	Irrit.
20	"	hypocarbonicum.....	"		"	"
21	"	iodohydrargyricum..	Aden.	Neur.	Cath. (Calomel.)	
22	"	iodoplumbicum.....	"	"	Suboraesthet.	
23	"	lacticum.....	Antacid.			
24	"	malicum.....	Antiph.	Neur.	Oræsth.	
25	"	nitricum.....	"	"	"	Aden.
26	"	oxalicum.....	"	"	"	"
27	"	phosphoricum.....	"	"	"	"
28	"	succinicum.....	Narcotic	Euphrenic.		
29	"	sulpharsenicum....	Neur.	Aden.	Oræs. Subcath.	Emetic.
30	"	sulpharsenosum...	(Realgar)	"	" Neur. Emet.	Subcath.
31	"	sulphuricum.....	Antiph.		"	Oræsthetic.
32	"	tartaricum.....	"		"	"
33	Æther	aceticus.....	Exhilarant,	Irritant,	Subantiphlog.	
34	"	bromohydricus....	"	"	"	
35	"	chlorohydricus....	"	"	"	
36	"	citricus.....	"	"	"	
37	"	hydricus.....	"	"	"	
38	"	hypocarbonicus (Seur	Oxalicus)	Exhil. "	"	
39	"	hyponitrosus	"	" "		
40	"	iodohydricus	"	" "		
41	"	malicus	"	" "		
42	"	sulphuricus	"	" "		
43	"	tartaricus	"	" "		
44	Alcohol,	.....	Narcotic,	Euphren.	Antisbestic,	Diaphoretic.
45	"	dilutum.....	Exhilarant.			
46	"	purum.....	"			

47 Aluminæ et Potassæ, Sulphas. Styp. Antiph. Neur. Suboræs, Subcath. [Subemetic.
48 Ammonia alkalina.....Subantiph. Oræsth. Emetic.
49 Ammoniæ Acetas.....Antiph. Neur. Laxat.
50 " alkalina aqua..... (see Carbonas.)
51 " " spiritus..... "
52 " auras.....Adenag. Neurag.
53 " bicarbonas.....Oræsth. Subantiph. Emet.
54 " bichlorohydrargyras..Neur. Aden. Cath.
55 " carbonas.....Oræsth. Subantiph. Emet.
56 " citras.....Antiph. Neur. Laxat.
57 " dichlorohydrargyras, (White Precipit. of M.) Aden. Neur. Emet. [Epispastic.
58 " disarsenas..... *Tonic.* Aden. Neur. Subemet. Subcath.
59 " disarsenis..... " " " " "
60 " hemiolochloroferras. " " " " "
61 " hypercarbonas.....Antiph. Neur. Laxat.
62 " malas..... " " "
63 " oxalas..... " " "
64 " sesquicarbonas.....Oræsth. Subantiph. Emet.
65 Ammonii chloridi bichlorohydrargyras ..Aden. Episp. Emet. Neur.
66 " sulphidi sulphohydris.....Neur. Aden.
67 " sulphidum..... " "
68 Antimonii deutochloridum..Anti Emet. " Laxative et Oræs.
69 " perchloridum.....Antiph. " Emet. Oraesthetic.
70 " et potassae tartras.. " Emet. " Oræsth. Laxat.
71 " sesquichloridum.... " " Emet. Oræs.
72 " sesquioxidum..... " Emet. Coxat. Neur. Oræsth.
73 Aqua fervens.....Epispastic.
74 " et spiritus ammon. alkal... (see Ammoniæ.)
75 Argenti nitras.....Oræsthetic. *(Not Tonic.)*
76 Arsenici protosulphidum....(Orpiment,) Aden. Neur. Oræsth. Subcath. [Emet.
77 " sesquisulphidum, (Realgar.) Neur. Aden. Subemet. Subcath.
78 Auri cyanas..... Aden. Neur. " "
79 " fulminas..... " " " "
80 " protocyanidum..... " Narcot. Neuragic.
81 " sesquichloridum..... " Neur. Subemetic. Subcath.
82 " sesquioxydum..... " "
83 " trisiodidum..... " " Suboræsthetic.
84 Aurum elementarium..... Mech. Irritant.

B

85 Baryti chloridum.....Aden. Neur.
86 Baryti iodidum..... " " Suboræsthetic.
87 Baurilli hydroquretum.....Pure Narcotic. Essential oil of bitter almonds.
88 Bismuthi tetrakinitras.....Pure Neuragic. (Pearl White.)
89 Brominum elementarium..Neur. Aden.

C

90 Calciæ acetas.....Antiph. Neur. Laxat.
91 " binacetas.... " " "
92 " carbonas....Antiphlogistic. Antacid.
93 " et Magnesiæ carbonas.
94 " Phosphato-Antimonis ....Anti. Emet. Laxative. Neur. Oræst.
95 Calcii chloridum.....Aden. Neur. Subantiph. Oræs.
96 " chloroxydum..... " " "
97 " deutiodidum..... Neur. Aden. "
98 " protiodidum..... " " "
99 " protoxydum.....Oræs. Subantiphlog.
100 Carbo lignarius.....Absorbent, Mechanical irritant.
101 Carbonis sesquichloridum.....Oræsth. Subantiph. Euph.
102 " dinitroquretum.....Narcotic.
103 " deutosulphidum.....Oræsthetic. Subantiph. Euphren.
104 Chlorinum elementarium.....Aden. Neuragic.
105 Creasotina.....Pure Oræsthetic or Irritant.
106 Cupri et Ammoniæ Sulphas..Neur. Styptic. Emet. Cath. Oræsthetic.
107 " diprotacetas..... " " " " "
108 " disiodidum..... " Aden. " Epispastic.
109 " hemioloprotacetas..... " Styptic. " Subcath. Oræsth.
110 " protacetas..... " " " " "
111 " protiodidum.....Oræs. Neur. " " Aden.
112 " protosulphas.....Neur. Styptic. " Cath. Oræsth.
113 " subprotacetas..... " " " " "
114 " triprotacetas..... " " " " "
115 Cuprum ammoniatum.
116 Cyanogenii protiodidum.....Narcot. Aden. Neur.
117 Cyanogenium.....Narcotic.

F

118 Ferri protiodidum.....Aden. Neur. Subemet. Subcath. *Tonic.*
119 " protocarbonas..... Tonic.
120 " protochloridum.....Adenagic. *Tonic.*
121 " protophosphas.....Tonic.
122 " protosulphas..... "
123 " protoxydum..... "
124 " sesquichloridum....Aden. *Tonic.*
125 " sesquiodidum..... " " Neur.
126 " sesquioxydum.....Tonic
127 Ferrum elementarium.....Mechanical Irritant.

H

128 Hydrargyri dichloridum.....(Calomel.) Neur. Aden. Cath.
129 " diprotosulphas.....(Aden.) Used as an Errhine.
130 " disiodidum.....Cath. Neur. Aden.
131 " disoxydi dinitras.... " " "
132 " disoxydum.....Neur. Cath. Adenag.

133 Hydrargyri oxydum rubrum....("Chemical Irritant.") Aden.
134 " præcipitatum album.. " " Oræsth.
135 " protacetas.....Aden. Neur. Emet. Epispastic.
136 " protiodidum..... " " Cath.
137 " protochloridum.....(Corros. Sublim.) Aden. Emet. Epispastic. [Neur.
138 " protocyanidum.....Neur. Aden. Narcot. Emet.
139 " protoxydum. Red Precipitate.) Aden. Neur. Emet. Epispas.
140 " subiodidum Cath. Neur. Aden.
141 Hydrargyrum elementarium Mech. Irritant.
142 " sublimatum carrosivum. (see 137.)
143 Hydrogenii dentoxydum Escarotic.
144 " dicarbureti dentochloridum (Chloric Æther).. Irrit. Subantiph. [Euphraenim.

I

145 Iodinum elementarium....Aden. Oræsth. Neur.

M

146 Magnesiæ carbonas.....Antiph. (Antacid.)
147 " citras.....Antiphlog. Neur. Laxat.
148 " hypercarbonas.. " (Antacid.)
149 " malas..... " Neur. Laxat.
150 " oxalas..... " " "
151 " sulphas..... " " Cath.
152 Magnesii oxydum..... " (Antacid.)
153 Morphinæ arsenas.....Narcot. Aden. Neur. (Tonic?)
154 " sulphas..... " Antisbestic. Euphrenic. Diaphoretic.

N

155 Nitrogenii protoxydum.....Pure Euphrenic or Exhilarant.

O

156 Oleum animale empyreumaticum....Pure Exhilarant.
157 " succini electri..... " "

P

158 Phosphorus elementarius.....Antisbæstic. Oræsthetic.
159 Plumbi diprotacetas. .....Styptic. Neurag.
160 " protacetas..... " "
161 " protiodidum.....Neur. Adenagic.
162 " protocarbonas. "
163 " protocyanidum. " Narcotic.
164 " protoxydum " Adenagic.
165 " triprotacetas .Styptic. Neuragic.
166 Potassæ acetas Anti Neur. Laxat.
167 " bicarbonas.. ....Antiph. " Oræsth.
468 " bihypercarbonas..... " " Laxat.
169 " binoxalas..... " " "
170 " bitartras..... " Cath. Neur.
171 " et calciæ silicas.....Mechanical Irritant.

172	Potassæ	carbonas	Anti.	Oræsth.	Neurag.	
173	"	chloras	Antiph.	"	"	
174	"	chloris	"	"	"	
175	"	citras	"	Neur.	Laxat.	
176	"	disarsenas	Neur.	Alter.	Tonic.	
177	"	disarsenis	"	"	"	
178	"	hypercarbonas	Ant.	Neur.	Laxat.	
179	"	malas	Anti.	"	"	
180	"	nitras		"	Oræsth.	Antiph.
181	"	oxalas	Anti.	"	"	Laxat.
182	"	sesquicarbonas		"	Anti.	et ?.
183	"	et sodæ tartras	Anti.	Cath.	Neur.	
184	"	sulphas	"	"	"	
185	"	tartras	"	"	"	
186	Potassii	chloroxydum	Aden.	Subantiph.	"	Oræsth.
187	"	cyanidi cyanauras	Narcot.	Aden.	"	
188	"	(cyanidi) cyanohydrargyras	"	Narcot.	Emet.	Neur
189	"	deutiodidum	Neur.	Subantiph.		
190	"	iodidi iodohydrargyras	Aden.	Cath.	Neur.	Emmenagogic.
191	"	protiodidi iodoplumbas	"	"		
192	"	iodidum	Neur.	Aden.	Subantiphlog.	
193	"	protocyanidum	Oræsth.	Narcot.	"	
194	"	protoxydum	"		"	

Q

195	Quinini	cyanidi dicyanoferris	Tonic.	Narcotic.
196	Quininæ	sulphas	*Pure*	Tonic. (?.)

S

197	Sodæ	acetas	Anti.	Neur.	Laxat.	
198	"	biboras	Antiph.	Neur.	Oræsth.	
199	"	bicarbonas	Antiph.	Neurag.	Oræsth.	
200	"	et calciæ silicas	Mechanical irritant.			
201	"	carbonas	Anti.	Neur.	Oræsth.	(Barilla.)
202	"	citras	Neur.	Laxat.	Antiphlogistic.	
203	"	diphosphas	Neur.	Antiph.	Catch.	
204	"	hypercarbonas	Neur.	Laxat.	Anti.	
205	"	malas	Neur.	Lax.	Antiph.	
206	"	nitras	Anti.	Neur.	Laxative.	
207	"	oxalas	"	"	"	
208	"	sesquicarbonas	Antiph.	Neur.	Oræsth.	
209	"	sulphas	Neur.	Antiph.	Cath.	
210	Sodii	deutiodidum	Neur.	Adenagic.	Subantiph.	
211	"	chloridi chlorauras	Neur.	Aden.	Narcot.	Subemetic. [Subcathartic.
212	"	chloroxydum	Oræsth.	Aden.	Neuragic.	Subantiph.
213	"	protiodidum	Neur.	Aden.	Subantiphlog.	
214	"	protoxydum	Oræsth.	(Caustic.)	Subantiphlogistic.	

215 Spiritus vini Gallici.....Antisbestic. Narcotic.
216 Stanni deutochloridum.....Pure irritant.
217 " protochloridum..... " " (Oræsthetic.)
218. Stannum elementarium.....Mechanical irritant.
219 Strychniae sesquiarsenas.....Aden. Neur. Narcotic.
220 Sulphur elementarium.....Neur. Aden. Cathartic.
221 " sublimatum..... " " "
222 Sulphuris protiodidum.....Neur. Suboræsthetic. Adenagic.

V

223 Vinum vitis viniferæ.....Antisbestic. Narcotic.

Z

224 Zinci pentakiprotacetas.....Styp. Emet. Catch. Neur.
225 " protacetas.....Styp. Emet. Cath. Neur.
226 " protiodidum.....Neuragic. Alterative.
227 " protocarbonas.....Neur. pura et Alter. (Lapis Calimin.)
228 " protochloridum.....Pure Oræsthetic or Irritant.
229 " protocyanidum.....Neur. et Narcoticum.
230 " protosulphas.....Styp. Emet. Cath. Neur.
231 " protoxydum.....Neur. et Alterat.
232 " sulphas.....Epispastic. Styptic. Emet. Cath.

Table of Powers and their Symbols.

(1.) Antiphlogistic.....Symbol...Antiph.
(2.) "Adenagic" or *Alterative*.....".....Aden. or Alter.
(3.) Sedative or "Neuragic".....".....Sed. or Neur.
(4.) Tonic .....".....Ton.
(5.) Diffusible Stimulants. "Antisbestics" .....".....Antisb. or Diff. Stim.
(6.) Narcotics .....".....Narc.
(7.) Exhilarants or "Euphrenics".....".....Euph.
(8.) Cathartics, Laxatives, &c. .....".....Lax. Cath.
(9.) Emetics .....".....Emet.
(10.) Agents which stimulate the respiratory system.
(11.) Styptics.....Symbol..Styp.
(12.) Levatics or Demulcents. (Vegetable) .....".....Lev.
(13.) Diuretics, Emmenagogues, &c. " .....".....Diuret. Emmen.
(14.) Rubefacients, "Oræsthetic ".....".....".....Rub. or *Oræs.*
(15.) Epispastic. Escarotic.....".....".....Epis. Escar. or *Oræs.*
(16.) Mechanical Irritant.....".....".....Mech. Irrit.

ART. III.—*Continuation of the "Case of Facial Palsy consequent upon Otitis,"* reported for the December number, 1849, of this Journal. By W. H. COBB, M. D., of Louisville, Ky.

By reference to the title of this article, it will be perceived that it is a supplement to a case of Facial Palsy published in December, 1849.

Lest any of my readers may not have seen the case referred to, or the circumstances have escaped the recollection of those who did read it, I have deemed it proper to recapitulate, in a brief and cursory manner, some of the more important symptoms.

The patient, Thomas Allen, 31 years of age, a man of small stature, and infirm health, entered the Louisville Marine Hospital in the month of September, 1849, for the relief of irritability of the bladder.

Oct. 7th. While the patient was still within the Institution, an acute attack of inflammation was ingrafted upon a chronic affection, of 5 months standing, of the left ear. A discharge of purulent matter from the left ear had existed at the time of his entrance, but as it seemed to give him but little uneasiness, no special treatment was directed towards it.

Oct. 20th. The paralysis of the facial muscles, combined with a slight degree of anæsthesia was noticed today for the first time. In reviewing the symptoms of the case, I ventured to predict that the palsy was probably owing to one of two causes—1st, ulceration may have extended to the substance of the Portio Dura while lodged in the Aqueducts Fallopii of the Temporal bone—or, 2nd, that the palsy was owing to compression of the nervous filamento by a piece of necrosed bone, or an abscess. At the time of making the last report (Nov. 10th) I had no idea that an opportunity would so soon be af-

forded me of verifying the conjectures as to the probable cause; the patient was gradually though slowly improving in his general health, his appetite had returned, and his strength was so much invigorated that he was enabled to walk about the wards, and even to perform the lighter duties required of him by the nurse. Still the motion of the palsied muscles did not return, the anesthesia continued, and the discharge from the left ear, though somewhat diminished in quantity, never entirely ceased.

The treatment adopted, was the internal exhibition of chalybeate tonics, counter irritation, and the endermic application of Strychnine over the pes anserinus, with exercise in the open air whenever the state of the weather would permit. About this period, he was unintentionally salivated by a purgative of calomel and rhubarb, notwithstanding the prompt exhibition of a dose of Ol. Ricini, when it was found that the medicine would not be likely to operate; the salivation however seemed to operate beneficially upon the disease, as the motion of the palsied muscles was to a slight extent restored. Still the patient, notwithstanding the manifest improvement in his strength, appetite, &c., suffered from frequent attacks of acute supra orbital pain of such violence as (using his own expression) to almost drive him distracted. Chloroform applied externally was the only remedy that seemed to have any effect in allaying them.

Dec. 1st.—7, P. M. The patient complained of intense pain in the head, but as this was no unusual circumstance, no particular attention was paid to him. His pulse was slow (the number of beats was not counted,) and rather weak, pupils slightly dilated, skin of the trunk and face warmer than natural, extremities cool, bowels open. The discharge from the ear affected, had diminished somewhat in quantity, as well as changed in quality, becoming thinner and more serous in its character. His mind was perfectly sane, as he answered questions ration-

ally and coherently. A compress, wet in cold water, was applied to the scalp and warm applications made to the feet.

Dec. 2nd. The patient, according to the report of the nurse, had an attack of shivering, shortly after my last visit, of so marked a character as to attract the attention of the patients occupying the adjoining beds. He was constantly putting his hands to his head, rolling from side to side, and endeavoring to get out of bed. Delirium, of a low, muttering character, supervened about 11 o'clock at night.

Actual condition at time of visit.—Still delirious, and constantly muttering the words "Bonny Canny," hands frequently applied to forehead, countenance expressive of great agony, pupils slightly contracted, skin of face dry and warm, tongue clean and moist, pulse 60, weak; bowels open, urine freely voided, extremities cold. Ordered, by Professor Gross, milk punch—a large blister to be applied to the nape of the neck, and the extremities to be immersed in a mustard bath, and afterwards to be kept warm, by jugs of hot water.

Dec. 2nd.—7, P. M. Patient still delirious, picking and pulling the bed-clothes, eyes affected with strabismus, pupils dilated and insensible to the action of light, surface of the whole body bedewed with a cold clammy perspiration, pulse, slightly increased in frequency, feeble.

Dec. 3d.—9, A. M. Patient lies constantly upon the left side; when laid upon his right side, he immediately resumes his former position. Symptoms same as last night, though in a more aggravated form. Pulse imperceptible at the wrist, two involuntary evacuations during the night. He continued in this state till about 3 o'clock, P. M., of the same day, when he died.

Postmortem. Appearances.—Body much emaciated. Face swollen and distorted. Upon removing the calvarium, sinuses and veins of the pia mater, of superior part

of hemispheres, were found highly congested, but no effusion of lymph or pus was detected. Base of the brain.—Surrounding the commissure of the optic nerves, and occupying the anterior subarachnoidean space, was an abscess containing about one ounce of fetid, scrofulous pus. The Dura Mater covering the upper surface of the petrous portion of the left os temporis at the entrance of the Vidian nerve, was of a dark red color for the extent of about two inches; the diseased portion of the membrane being of an elliptical shape, and terminated by a well defined margin of healthy structure. Beneath, and corresponding exactly in extent with this elliptical discoloration, was clustered together a number of scrofulous tubercles of the size of split peas; some of these bodies were crude, others in process of ulceration and softening, resting upon a base of carious bone. On their removal, the substance of the petrous pyramid was found extensively diseased; ulceration had attacked not only the Aqueductus Fallopii, and thereby destroyed the continuity of the Portio Dura, but had penetrated into the cavity of the tympanum. Substance of the 5th pair of nerves was found entire, but somewhat softened in texture, thus accounting most satisfactorily for the incomplete anæsthesia of the facial muscles.

ART. IV.—*Small Pox—Vaccination and Revaccination—their present position.* By THEODORE S. BELL, M. D., of Louisville, Ky.

When Europe was a prey to that direful scourge—Small Pox, which annually immolated 400,000 persons upon its horrid altars, and broke down the constitutions, and disfigured for life the vast multitudes whose cases were not

fatal, if any one had appeared in the midst of the pestilence, and proclaimed that a discovery would soon be made that would disarm this plague of its power; that would restrict its ravages within narrow limits; that would so far protect nations from its violence that kingdoms devastated at the rate of 15 and 20,000 per annum, should pass from thirteen to twenty years without having a case of the disease; that with means so mild that the sucking infant, the delicate female, and those who were decrepit from age, might enjoy its beneficent powers without danger, injury, or suffering; that the immunity might be so perfect that a new born infant, whose mother might be covered with the eruption, could draw nourishment from the mother without imbibing contagion, and that vast numbers of persons thus protected, would be free from any danger of taking the disease, no matter how much they might nurse their friends, nor what the exposure might be, the promise would have been looked upon as entirely too visionary in its character ever to be realized, too beneficent ever to be hoped for, and none would have credited it. From the "Indus to the Pole," in all the varieties of the human race, under all the modifications of climate, unrestricted by zones, disregarding all those limits that other diseases respect, this terrific scourge held its relentless course, strewing its path with unnumbered corses, and leaving monuments of its prevalence nearly all over the world. Every tribe on earth that has domestic animals once showed the footprints of the scourge of the human race.

In the midst of the disastrous visitations of small pox, a distinguished English lady, somewhat renowned in literature, announced in 1717, that the Turks had a mode among them by which the disease was greatly mitigated and the mortality very much lessened. Lady Mary Wortley Montague, the lady referred to, said: "The small pox, so generally fatal among us, is here entirely harm-

less, by the invention of *engrafting*, which is the term they give it. Every year thousands undergo it, and the French embassador observes pleasantly, that they take small pox here by way of diversion as they take the waters in other countries." But it was not so pleasant and harmless as Lady Mary described it. The Turkish invention carried the disease to the doors of thousands whom it would not have reached on its wings. But even the dangerous benefits of that practice were eagerly sought after, so great was the terror in which mankind held the scourge. Its disastrous results in many cases, were forgotten in its benefits in others, and the practice of INOCULATION gradually came into vogue. While it presented strong claims in some points, there were debentures connected with it, that almost counterbalanced its good offices, and made it a matter of reasonable doubt whether it were a curse or a blessing. However beneficial inoculation might be to the individual, he had contracted a contagious disease that often spread disaster in a "natural way." And in all regions of the earth there are places that see the disease only at intervals of time, and thus, unless the fires of pestilence were kept perpetually burning in their midst, there was risk that the inoculating principle would be lost, and the natural contagion would, in a sudden irruption, find multitudes of the young unprotected. Nor was the inoculated small pox always that safe and mild disease that its early advocates represented it to be. It often proved fatal. And it was impossible that confidence could be founded on a method attended with dangers that menaced society; that was not available and safe at all times, that often extended ravages it was intended to prevent, that fell into improper hands for distribution among the young, and was frequently severe and sometimes fatal. For these reasons, instead of restricting the epidemic severities of small pox, inoculation tended to promote them, and often created them. Bills of mortality are the proper

test to apply here, to ascertain the results of the practice and they teach that prior to the introduction of inoculation, seventy-two in a thousand cases died, while forty-two years after, the proportion was found to be eighty-nine in a thousand. And though inoculation diminished individual suffering, let the fact be repeated, and fastened upon the memory, that it extended the ravages of the disease by furnishing contagious matter. Inoculation also awakened, developed and often created scrofulous disease, and thereby became a species of engrafting, that was scarcely in harmony with the preservation of the public health. Some years ago I prepared an essay for popular use, on the ravages of small pox, and shall use a portion of the facts then gathered, for the present description.

There is no kind of reason to doubt that small pox was among the early diseases that afflicted humanity. Its independence of climate, position or habits of men; its remarkable aptitude for attacking the human constitution; the pastoral habits of the early tribes, and the universality of its ravages within the period of recorded history, render the suggestion of its early appearance upon the earth, after man's creation, a highly probable fact. It is or was the universal heir-loom of the human race; the moment that ushered a human being into existence constituted him a mark for this plague, and it hung over him through life, ofen sparing the blow until age had withered the vital powers, and then hurling into the grave those who were tottering on its brink. The earth long groaned under small pox as the scourge of the human race. The first recognizable record of it is, probably, that found in the History of the Peloponnesian war, by Thucydides. No well informed medical man can read the description given by that author of what is called "the Plague of Athens" and imagine that he is reading of what is denominated Oriental Plague. There is scarcely a trace of similarity in the symptoms of the two diseases. And there is cer-

tainly no essential feature of small pox that is not mentioned by Thucydides. That pestilence often broke out in walled cities, carrying sorrow, desolation and death among all classes, ages and conditions. It swept off thirty thousand inhabitants in a single year, within the confines of one city. It often attacked immense beseiging armies, and they melted away before it, like frosts before the morning sun. In Prussia, the bills of mortality show that the loss in that kingdom, per annum, when small pox raged in it, was often over fifteen thousand, and rarely ever much less. In Great Britain, the annual loss was from forty-five to fifty thousand persons. The earth stood aghast at the unrelenting scourge, against which science furnished no protection, quarantines no succor, medical hygiene no hope. The capital of Thibet was entirely deserted by its inhabitants for three years on account of the pestilence. It swept off two millions of people in Russia in one year, and three and a half millions in Mexico in a short space of time after it commenced its devastations. About 8 or 9 per cent. of the human race, it was estimated, was swept off by small pox, and an accurate calculator has estimated that fifteen millions of human beings fell victims to it every twenty-five years. In spite of the insular position of England, and in defiance of all her intellectual power, small pox was imported into the island one hundred times in seven years, and in the year 1800, it was imported into England twenty times by the channel fleet alone. These imperfect sketches of the habitudes of the great scourge, sketches of partial spots, are pictures of almost all places on earth. The only blossom that flowered amidst the solitudes of this desolated waste, and in this vast field of death, was found in the consolatory fact that those who lived through one attack, were tolerably exempt from a second.

But while this dark pall hung over the nations of the earth, the power of mind was about to be exerted in dis-

robing the pestilence of much of its horror. The man and the occasion had come, and the lofty, beneficent and glorious mission of philanthropy could not have fallen into better hands than those of Dr. Edward Jenner. He is entitled to honor for the noble use he made of his rare and wonderful powers, and the medical profession may not only point to him as one of the greatest benefactors of the human race, but as one of the chief dignitaries of humanity, and ornaments of the medical profession. His name and his character will be cherished as long as the human heart beats responsive to a noble impulse.

For a great length of time before the days of Jenner, an idea prevailed that some of the milkers of cows were not exposed to the invasion of small pox. Why they, as a class, should be exempt from a disease which claimed possession of every other human being, seems never to have awakened inquiry in the mind of any medical man, until it aroused the attention of Jenner. Long after he had commenced his investigations of the prophylactic powers of cow pox, he found it impossible to awaken the interest of his medical brethren on the subject. Many of them were on terms of the most intimate intercourse, both professionally and convivially, with Jenner; he was a member of two clubs, in each of which there were medical gentlemen, but they looked upon the stories of the milkers, as they did upon Mother Goose's Melodies, or the records of Jack the Giant Killer. Jenner's medical brethren gave him neither co-operation nor countenance. There was one notable exception to this professional apathy, and it is by no means the least of the pleasant memories and noble honors that are associated with the name of John Hunter, that he warmed and cheered Jenner on his path of discovery. The mind of John Hunter was always awake to every thing that concerned the well being of man, and he urged his highly prized pupil onward in his investigations.

As early as 1770 Jenner communicated to John Hunter the common opinion entertained among milkers, of the power of an inflammatory disease, derived from the cow, to exert a prophylactic influence upon particular persons, by which they were preserved from small pox. The idea had often been heard by physicians, but they made no effort to investigate the statement, or to make any practical use of it. This is a memorable instance which teaches that popular observation is not always false, and should not be rejected without examination. Dr. Davis, of London, forty years after the "Inquiry" of Jenner was published, stated during a debate in a medical society, of the Metropolis, that he remembered an instance in 1798, when he had been ordered to a distant part of England, for the purpose of inoculating a British Regiment, that there were two of the soldiers who refused to be inoculated, alleging that they had been milkers, and had taken a disease from the cows, which protected them from small pox. And while the small pox was in the regiment, one of the men voluntarily slept with persons who had it, and he did not take the disease. The other, although he affirmed he was safe, was inoculated thirteen times by Dr. Davis, and proved his immunity by failing to take small pox. These striking and extraordinary facts made no impression of any value upon the mind of Dr. Davis, and he neither reasoned upon the phenomena, nor attempted to follow them up. It was, perhaps, fortunate for the world, that the mission of delivering the invaluable truths of vaccination fell into the hands of Edward Jenner. His intellectual gifts and manly virtues were precisely adapted to the great and important subject that was destined to influence all the future of the human race. He was an earnest seeker after truth, patient, careful and prudent in the collection of facts, enthusiastic and firm in maintaining them. He was not the creature of impulse; no wild visionary, no reckless dealer in unproved theo-

ries, but a true member of that school that feels that nature and observation are worth worlds of fanciful speculation. In perfect keeping with these mental traits, Jenner was singularly free from any thing like selfishness. So full and unreserved was he on the subject that occupied nearly thirty years of his life merely in making investigations, that he might easily have been robbed of the renown of his discovery. But he made it all his own, by the general incredulity of his medical brethren, and his own unfaltering devotion to working out the great pathological and physiological problems before his mind.

In order to give the practical details of this paper their proper fullness, it will be necessary to be very brief in the sketch of the early events of vaccination, although the subject is replete with interest.

It has already been mentioned that Jenner communicated to John Hunter the common belief in the prophylactic power of the vaccine disease, as early as 1770. In unravelling the mysteries connected with it, he devoted twenty-four years of his time, before he vaccinated a human subject. The common opinion, and this influenced Jenner's mind long after he made his discovery, was that it was necessary that the disease should be caught from the cow. Looking back, from the present point of time, the sluggish movements of the truth, and the uncertainty that attended them, look very much like the processes that Charles Lamb ascribes as attendant upon the Chinese discovery of roast pig.

In 1796 Jenner successfully vaccinated the child of his friend Hicks, and afterwards inoculated it with small pox matter, without affecting the child with that disease. In 1798 he published his first work on the subject, and aroused the attention of the public. The services of able coadjutors had been already obtained, but a serious drawback was found in the idea that the lymph for vaccination must come either directly from the cow, or be taken

from the arm of the subject on the eighth day of the vaccination. It was often the case that Jenner was in want of vaccine matter for long periods of time. But he had mastered the main points of his great subject, and was armed for the bitter warfare his great discovery brought upon his head.

There is nothing more extraordinary in the history of vaccination than the character of the weapons used against it by a portion of Jenner's medical brethren. It would be but reasonable to suppose that upon a subject of this kind, medical men would have experimented in order to try the new doctrine upon its merits, and that they would have rejoiced in the opportunity offered them for benefiting humanity. But compared to the statements made by some of the profession against vaccination, the scenes described in Munchausen are sober facts, and the language of Billingsgate and St. Giles makes quite as nigh an approach to the refinements of poetry, as some of that employed against Jenner does to truth, dignity and propriety. Three of the physicians referred to attained their bad eminence by the energetic efforts they made for reaching it. Birch, the surgeon of St. Thomas's Hospital, was violent against vaccination. He delivered gratuitous lectures against it, and constantly urged the surgical students to have nothing to do with it. He devoted his life to opposition to vaccination, and flared forth his enmity to it on his tomb-stone. He died in London, and ordered in his will that his tomb-stone should have inscribed on it, that the virtuous being who reposed beneath it "was all his life-time opposed to cow-pocking." His demerits have done for his name and his memory, what his merits would have failed to do. Rowley made himself conspicuous by his ferocity, malignity and falsehood. But Moseley, physician to Chelsea Hospital, excelled even these men in his warfare. He published a book, which proved, contrary to his expectations, to be the sepulchre of his

fame. He had handbills published and placarded on the houses of London, in which he affirmed that those who submitted to vaccination were converted into beasts. He gravely affirmed that a lady who had been vaccinated sprouted a pair of horns; he told of cases of vaccinated persons who had their epidermis covered with hair, and who had so far responded to the philosophy of Lord Monboddo as to grow a tail. According to Moseley, there was at least one vaccinated child in Peckham that run on "all fours," bellowed like a cow, and butted like a bull. Some wag, who seems to have gone into vaccination tolerably extensively, undertook to expostulate with Moseley on the horrors of his book. He said:

"Oh Moseley thy book nightly phantasies rousing,
Full oft makes me quake for my heart's dearest treasures;
For fancy in dreams oft presents them all browzing
On commons, just like little Nebuchadnezzars.

There nibbling at thistles stand Jem, Joe and Mary,
On their foreheads, O, horrible! crumpled horns bud;
There Tom with a tail, and poor William all hairy,
Reclined in a corner, are chewing their cud."

The pulpit too, true to that unity of purpose that characterises its efforts with the gospel, of which it has assumed the management, entered the arena, and sermons were delivered for and against vaccination.

These miserable attempts at opposition, here briefly recorded, had no other effect than to cover their authors with shame and confusion. The beneficent truths of Jenner made rapid progress over the earth. The distant tribes of the world heard that a hand had risen that could stay the plague that had devastated the earth, and which had, hitherto, resisted all other efforts, and in imploring tones begged for the rich boon. No one fact more conclusively establishes the universal dread and horror in which small pox was held, than the celerity with which the

news of the discovery of a prophylactic against it, spread through the world. It seemed to move almost with the speed of the electric flash. In an incredibly short space of time, in the circumstances that surrounded the discovery, vaccination was rapidly adopted all over the continent of Europe; zealous, able, and intelligent physicians, animated with the spirit of Jenner, eagerly embarked in the work of extending the new blessing. In the great focus of inoculation, Turkey, vaccination was seized with avidity, and its beneficent gifts were soon given to India, China, and Persia. Throughout the regions of the earth, where the races of men are associated with inferior animals, the protective power of vaccination was eagerly sought after. But a detailed history of these events would extend this essay to an unreasonable length, and the investigation of the results of vaccination, which is most essential to an understanding of the subject, will sufficiently exhibit the diffusion of vaccination.

Art. I.—*The State of Vaccination during Jenner's life.*

A common opinion is entertained that Dr. Jenner was impressed with the belief that vaccination was a perfect and universal protection against small pox. But he did not entertain any such opinion. In fact, the peculiar view he entertained of the identity of small pox and cow pox, would of itself, have guarded him against such a sweeping conclusion. There were friends of Jenner, active vaccinators, who made the all-engulfing generalization referred to, in which they resembled the boy who ascribed the difference in the length of summer and winter days, to the varying degrees of caloric, but Jenner was not a philosopher of this kind. He believed that human small pox was identical with cow pox, and held that the same laws governed both diseases. He knew of a child in Plymonth, England, who was vaccinated; three

years after, during an alarm growing out of the prevalence of small pox, this child was innoculated, and had small pox, and some years after he caught small pox in the natural way. Jenner also knew a lady who had small pox five times. He records also the case of a surgeon, who caught small pox whenever he attended cases of the disease. Jenner was familiar with the case of a boy who was vaccinated in India, and upon his arrival in England was successfully revaccinated. He was afterwards inoculated and took small pox, and sometime after took the disease naturally. Another case was well known to Jenner. It was that of a lady who nursed small pox forty years, was requested to nurse a friend at Bristol, who had small pox, from whom the nurse caught the disease and died with it. She had supposed that she had the disease in infancy.

In view, then, of Jenner's peculiar opinion, that the vaccine disease was a mild form of small pox, the malignity being modified by its passage through the cow; in view of this well known opinion, and of the facts that were familiar to Jenner, it must at once be seen that he was not so ultra on the subject of vaccination as to believe that it was an eternal preventive of small pox. On the contrary, in a letter to Dr. Willan, dated February 23, 1806, Jenner says: "It strikes me that the constitution loses its susceptibility of small pox contagion, *and the capability of producing the disease in its ordinary state*, in proportion to the degree of perfection which the vaccine vesicle has put on in its progress; *and that the small pox, if taken subsequently, is modified accordingly.*" No one contends that Jenner committed no mistake in the great and philanthropic mission he undertook: he undoubtedly committed an error in supposing that vaccination gave as perfect immunity against an attack of small pox, as a primary case of that disease gave against a secondary one. The chief wonder is, now, upon a survey

of the subject, after the experience of fifty years, that the zeal of a discoverer did not lead Jenner into more mistakes than he made.

The theory adopted by Dr. Jenner is that the horse is subject to small pox, to which farriers have given the very inexpressive name of grease. It was considered that a high degree of probability attended the opinion that the cow caught the malady from the horse, and there are striking facts that go far towards sustaining that opinion. The facts presented by St. Asaph scarcely admit of any other construction. Mungo Park found a current opinion in Africa that small pox was derived from the camel, and that well-informed and observant traveler coincided in the opinion. There is one form of "grease" in the horse which has all the essential aspects of small pox, and it may be well enough to remark that veterinary surgeons describe three varieties of grease in the horse—the phlegmonous, the strumous, and the variolous. Some years after Jenner's death, Dr. Sonderland, whose scientific position was certified by Hufeland, made experiments to ascertain whether the cow could be infected by exhalations of the contagion of human small pox, and he succeeded. Others have, since that, failed in the experiment. In the 26th volume of the London Medical Gazette, Mr. Ceely published some excellent papers on the various diseases of the cow, which pass under the name of cow pox. No one who undertakes the difficult and hazardous experiment of starting cow pox in the cow, by inoculating her with variolous matter, should do so without studying very carefully the papers of Mr. Ceely. That gentleman succeeded in producing genuine sores in the cow by inoculating her, and thus seemed to sustain Jenner's view of the identity of the two diseases. Dr. Waterhouse, of Massachusetts, states that small pox was given to cows in New England, in consequence of being milked by persons who had small pox. Fiart, in

France, undertook to obtain fresh vaccine virus from the cow, by inoculating her with small pox matter. But he failed, and announced his belief that the disease was unknown in the dairies of France, but soon after this declaration it was found that the disease was raging at Passy, in France. Dr. Baron states that an interval of fifteen years passed, even in the dairy county of Gloucestershire, without a case of the disease among the cows. But *leus bovilla* is often extremely fatal. Thus, in Moidapore, in India, where the experiments of Sonderland were repeated for the purpose of procuring fresh vaccine matter, and in which they failed, the distemper broke out among the cattle naturally, and they died at the rate of from 15 to 20 per cent. The symptoms were very severe; pustules were all over the body, and the ulceration of the mouth and fauces was so extensive that the animals died from inanition. Dr. Alcock believes that a similar state of things in the confluent small pox of human beings is the cause of the great mortality in that disease. But to return: the matter obtained from two of the cows, at Moidapore, that were suffering with the distemper, was used in vaccinating children. The children thus vaccinated were afterwards inoculated without any result. In addition to these facts of cow pox, a multitude of examples might be given in proof of the protective power of the equine matter. Drs. Sacco and De Carro mention examples that should silence all cavilling on that point. It is familiar to the readers of the history of vaccination, that a man, in Paris, caught an eruptive disease in his hands, from dressing the variolous "grease" in the horse, and that numbers of children were vaccinated successfully from his hands. Proof might be piled upon proof on these points, but it is scarcely necessary to pursue it. The question involved in these points is not the one at issue.

The identity of cow or equine pox, with small pox has

been questioned. That there is some analogy between the three affections is not a doubtful point, but it is contended that the differences are too many and too great to make a good parallelism. The identity was supposed to consist in the fact that cow pox gave as perfect immunity from an attack of small pox, as small pox itself does. It was inferred that inasmuch as one attack of small pox protected from a second attack in the generality of cases, cow pox would be equally as effectual and general in its effects. Other branches of the phenomena were supposed to be identical. But Dr. Gregory states the differences between the two diseases, in such terms as to almost prove the want of relationship between them. He says: "the VARIOLOUS VESICLE advances with areola from the first; it cannot be perpetuated from man to man in similar states of intensity. Its reception by inoculation is always attended with more or less fever. When received by respiration, the febrile disturbance is often excessive, and may be fatal. However generated it throws off contagious emanations. The infectious principle of small pox is given off from the earliest period of eruption. Fourteen days is the ordinary period of the incubation of the variolous germ. VACCINATION, when first taken from the cow is often severe and produces sometimes an ugly eruption, once taken for small pox. It loses this property by assimilating to the human constitution. The areola is circular, and does not commence until the 8th day. It can be pepetuated from man to man in uniform intensity. It is producible in man by inoculation alone, and not by any combination of common causes. Vaccination may advance and run its perfect course while the system is incubating, and preparing to throw out perfect small pox. In all such cases the period of incubation is free from fever. The lymph of the vaccine vesicle, raised while small pox is thus in the blood, will communicate perfect and uncontaminated cow pock. The small pox thrown

out while the system is under the full influence of vaccination is perfect and capable of transmitting genuine small pox to others. The vaccine virus is natural to the cow, or produced by a human vaccination or by small pox inoculation. It does not prevent any cow disease that we know of."

In view of these distinctive features, it would be difficult to establish that identity between the diseases for which Dr. Jenner and his friends contended. Nor is it essential to the value of vaccination that the identity of the diseases shall be established. It is quite sufficient that the appropriate prophylactic powers of vaccination shall be correctly understood and appreciated. If vaccination be equal to its claims, it would make no difference if the antagonism between small pox and cow pox was greater than it is. The theory may be safely surrendered, if the integrity of the practice remains.

Art. II.—*Failure of Vaccination.*

The violent opposition manifested against vaccination, in its early days caused, as has been shown, much malignant and bitter falsehood, but time began to reveal that the cause itself had salient points, and the bitterness of medical partisanship was not slothful in seizing upon every thing of the kind, and magnifying them. The facts mentioned by Van Sweiten, Heberden, Dimsdale and Hufeland, that mongrel exanthematous diseases, resembling small pox but distinct from it, often prevailed, seem to have been forgotten, and every anomalous event of this kind that happened after the introduction of vaccination, was eagerly seized upon to prejudice the cause of vaccination. But that cause can scarcely be injured in this way. The immunity of immense numbers of the vaccinated from small pox; the myriads who have passed through life without small pox, since the introduction of

vaccination, who, according to all past experience and observation among men, would have been subject to that horrid distemper, constitute a bulwark of protection for the cause of vaccination, against which assault is futile. Dr. James Johnson, editor of the Medico-chirurgical Review, says: "there is one earthly evil to which humanity is liable from the moment of leaving the womb, and even before it—that evil is variola." It was so nearly in the nature of an heir-loom, that fond parents hastened to put their children in possession of it as early as possible, because its visitation was looked upon as inevitable.

The varioloid epidemic, in Scotland, described by Dr. Thompson, first shook the public confidence in the protective power of vaccination. It is not necessary to enter upon its details. The conclusion of Dr. Thompson, after a full survey of the epidemic, is more in unison with the purposes of this paper, and remarkably confirms the observation of Jenner, in his letter to Dr. Willan, already quoted. Dr. Thompson says: "it has been impossible to see the general mildness of the varioloid epidemic in those who had undergone the process of vaccination, and the severity, malignity and fatality of the same disease in the unvaccinated, and not to be convinced of the great and salutary powers of cow pox in modifying the small pox in those who were afterwards affected with this disease. Proofs cannot be imagined more convincing and satisfactory of the efficacy of the practice of vaccination and of the incalculable benefits bestowed upon mankind by its discoverer, than those I have had the pleasure of witnessing." And it was in reference to this varioloid epidemic and kindred occurrences, that the truthful and honest-minded Jenner wrote his last opinion on vaccination, on the back of a letter, a few days before his death. He then declared: "My opinion of vaccination is precisely as it was when I first promulged the discovery. It is not in the least strengthened by any event that has happened,

for it could gain no strength; it is not in the least weakened, for if the failures you speak of had not happened, the truth of my assertions respecting these coincidences which occasioned them would not have been made out." It is, now, nearly thirty years since those remarks were penned, and time has accumulated many facts on the whole series of questions involved in vaccination. The reader who may carefully read what follows, will be able to place a proper estimate on the whole subject.

Art. III.—*Small Pox Visitations.*

The small pox sometimes attacked the fetus, often seized upon the newly born infant, and was looked upon formerly as one of the most certain of the diseases that assailed humanity. A case is related of a mother, thirty-one years of age, who was vaccinated when an infant. She was delivered of a male infant, iu 1841, in the eighth month of utero-gestation. The premature labor was believed to be Induced by small pox in the child. It was covered with pustules at their height, in the second day of their progress. The pustules matured on the fifth day, and on the ninth, the child died of confluent small pox. A week previous to the labor, the mother felt ill, had a sharp fever, suffered from heat of stomach and loss of appetite.*

Dr. Mead mentions, in his works, a case of small pox in the fetus, and Dr. Jenner describes two cases, in the Médico-chirurgical Transactions.

Dr. Deneuse, in the *Gazette Medicale*, reports the birth of a child, which had the variolous eruption in the 11th or 12th day of eruption at birth. The mother never had the small pox, had seen no such disease, and was vaccinated in early life.

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*Bulletina delle Scienze Mediche di Bologna.

In the statistics, published by Mr. Farr, and which are properly regarded as a model, the following fearful facts are stated: Of 9,762 deaths from small pox, in England and Wales, in 1838 and '39, there were.

Under 5 years of age, - - -	7,340
Between 5 and 15 years of age, - -	1,668
" 15 and 30 " " " - -	528
" 30 and 70 " " " - -	210
Upwards of 70 " " " - - -	16

Thus of the 9,762 deaths from small pox, 9,008 occurred at that period of life, in which vaccination exhibits now, an almost undiminished power. From the statistics of the whole world, it is doubtful whether there would have been ten deaths in the 9,008 that occurred between infancy and the fifteenth year of these victims, if they had been vaccinated. In an experience of nearly twenty years in small pox, one year of which exhibited a small pox epidemic, the writer of this has rarely seen a case of varioloid under the fifteenth year, and never saw a severe case under that age.

It is not a little remarkable that there should have been in England, in 1838, and '39, 25,017 deaths from small pox. Taking 20 per cent. as the ratio of mortality, we have 154,000 as the number of attacks in those two years, among a people who had ample power to protect themselves against most of the attacks. These facts show a shameful negligence on the part of the public authorities, as well as among the people. As an evidence of what can be done by proper enforcement of vaccination, it is only necessary to examine results in England. The extensive prevalence of the disease, and great mortality in 1838 and '39 aroused public attention. In 1840 the attacks amounted to 10,434, the year after the new act of Parliament, enforcing vaccination, and prohibiting inoculation, the number sunk to 6,362, and in 1842, to 2,715.

Austria enforces vaccination very rigidly, and the mortality from small pox in that empire, is very low.

But a better view of the character of small pox visitations may be obtained by looking at the returns of deaths in England, prior to vaccination, and before its general diffusion. The National Vaccine Institution makes the following report of deaths from small pox:

From 1790	to 1800	1,768	92	deaths	to	each	thousand.
" 1800	to 1810	1,374	73	"	"	"	"
" 1810	to 1820	833	43	"	"	"	"
" 1820	to 1830	713	35	"	"	"	"
" 1830	to 1832	654	26	"	"	"	"

It is estimated that before the introduction of vaccination, 6 in every 10 deaths was from small pox, and since vaccination was promulgated, about 3 deaths in every 100 were from small pox.

The accurate statistics of mortality in London, show that before the introduction of vaccination, the average amount of death, from small pox, in the Metropolis was 5000, and the average is now about 300, and that number is believed to be in consequence of the continued practice of inoculation. That practice keeps up the disease and spreads it.

The statistics of Ceylon show the character of small pox visitations. That island was formerly ravaged extensively by the disease. The amount of mortality was 110 in 1.8 cases.

There is no age exempt from small pox. Mr. Bigges, of Newark, England, mentions an instance, detailed to him by Decandolle, at Geneva, in 1833. Decandolle said, that in the early days of vaccination he was present at the Institute of France, when a report on vaccination was to be received. It was highly favorable to the cause; every body was going to be vaccinated, and all the members were going to be vaccinators. Next to Decandolle sat an

aged and dignified Duke, who remarked that he had a word or two to say. He said vaccination was well enough for the generality of people, but he had got along eighty-four years without troubling Dr. Jenner, and he should crave leave to continue to do so. One month after, Decandolle was present at another meeting, and he noticed that the chair next to him was vacant, and upon asking where his aged, dignified and well-esteemed neighbor was, he was informed that the old Duke who had felt so independent of Dr. Jenner's discovery, had died with small pox.

In the preliminary remarks to this essay a general view of the awful character of the visitations of small pox was given. In order to complete the picture, a few incidents may be mentioned, and if the reader's attention is fixed upon the multitude of cases that occurred, similar to the following, he may get a true view of the depth of the dark shades that belong to the picture of small pox visitations. In Newark, England, an infant was inoculated for small pox; the mother caught the disease from it and died, leaving six helpless children. A clergyman reported that he was in the habit of burying two or three children every evening, during small pox visitations.

These are but glances at the great subject—the earth was as thickly studded with evidences of small pox visitations, as the firmament is with stars. Nations quaked with fear, districts were almost depopulated, and large cities were entirely abandoned. Terrific as yellow fever, plague and cholera are, they are small afflictions compared with what small pox once was, until the human mind mastered it, and curbed its power. The only solace connected with the evil was in the fact, that a large number of those who lived through one attack, would be secure against a second; but even that consolation was attended with dread—no one of those who had had the disease, knew who might be the subject of a second attack, and

as a general rule, those who had passed through one attack found no guaranty in that, that the second would be mild. It may be worth while to look at second attacks of small pox.

Art. IV.—*Second attacks of Small Pox.*

It was supposed in the early days of vaccination that second attacks of small pox were quite as common as small pox after vaccination, and no less an authority than M. Serres says this is the truth of the matter now. The question is of difficult solution. The complication of statistics in some points, and their barrenness in others, not only create confusion, but cause inquiry to fade into obscurity just at the critical stage of the investigation. It is easy enough to gather statistics from Prussia, Wirtemberg, Norway, Denmark, and England, that seem to say positively, that the proportion of vaccinated persons who take small pox is much larger than of those who have small pox the second time. But these restricted statistics are delusive, and a cheat upon the understanding. They necessarily leave out of view the vast number of persons over whom vaccination continues to exert a protective influence. For instance: Statistics show that a much larger number of persons have small pox in the early period of life than in old age, but it would be an erroneous conclusion to say that old age is less susceptible to variolous contagion than infancy. The disproportion arises from the fact that the disease has performed its mission among the young, and there are few who reach old age, with a susceptibility to the disease. Imagine 2620 inhabitants of a district; say that 2000 of them had small pox in infancy; four hundred take it in adult life, during an epidemic, and of 20 persons, over seventy years of age, 19 take it during the same epidemic, it is evident that this proportion would prove old age

more susceptible than infancy, to variolous contagion. And if in any given district there are ten thousand persons who have been vaccinated, and one hundred persons who have had small pox, a large number of cases of small pox after vaccination would be required, to bring that side of the question of liability on a par with the very limited number of persons exposed to small pox a second time. In all these investigations the number of vaccinated persons who escape small pox and varioloid is an important element in the statistical details, and it is universally omitted. An approach to it in some instances gives a cheering view in favor of vaccination, and a full survey of the whole subject will show how much the world has gained by Jenner's discovery. Here in Louisville many persons have had varioloid and small pox after vaccination, and a few have had second attacks of small pox. But then there were so few that had had first attacks, compared to the multitude of vaccinated persons, that it is probable that the relative proportion in the former is quite equal to that of the latter class.

In the records of small pox that preceded the promulgation of vaccination, there are but few details, and the phenomenon of second attacks was either no phenomenon, or it was unnoticed. A fact respecting Sydenham shows how much uncertainty prevailed even in his time on the subject of small pox. The world owes a great deal to that eminent man, for his accurate and judicious views of the treatment of the disease, but it is evident that he did not feel sure that it was a contagious disease. In the edition of Sydenham's works, published in 1666, he expresses the opinion that variola is contagious, but in the edition of 1685, published four years before his death, the edition which he considered the most perfect, he omitted everything that he regarded speculative, and it is not a little singular that among the omitted speculations is the doctrine of the contagion of small pox.

It is necessary then, in order to reach truthful conclusions, that investigations on the point under consideration shall be made among those records that speak distinctly on the subject.

A singular case is detailed in the Transactions of the College of Physicians, in 1785. Two children, in one family, were inoculated; in each a single pustule formed. Matter was taken from these children and other persons were inoculated with it. All of these had fever and an eruption of pustules. At the proper time the first children were reinoculated, and on the 9th or 10th day a smart fever was developed, and with it, an eruption of variolous pustules.

The *Journal Universel* details the following case: a girl had small pox when she was six years old, and seventeen years after she had an attack of confluent small pox, of which she died in the suppurative stage.

Renart reports a case of distinct small pox followed in six weeks by an attack of the confluent form of the disease, which ended fatally.

Dr. Marshal reports, in the London Lancet, 896 cases of small pox, 10 of which were second attacks, being nearly 2½ per cent. In Wirtemberg, of 624 cases, 93 were second attacks, being 1 in 16. Mohl reports, at Copenhagen, 988 cases, 153 of which were second attacks. 31 of the 153 died.

Mr. Lawrence, of the Royal Military Asylum, Chelsea, reports a number of interesting facts. The total number of children admitted in 32 years, from 5 to 14 years of age, was 6,521, of which, 2,532 had small pox previous to admission; 3,080 had been previously vaccinated; 630 were vaccinated in the institution, and 9 had never had small pox, nor vaccination. Of the total number only 62 had small pox in the Asylum; 26 after reputed small pox, and 24 after reputed vaccination. Here then the number of vaccinated persons predominated over those who had

had small pox, and the second attacks in the latter case were more numerous than in the former. The second attacks of small pox were one in nearly 98, or 1. 100 per cent; and small pox after vaccination amounted to one in nearly 129, or 1. 1.25 per cent. Five died of the disease, 3 of whom were supposed to have had small pox before; the other two had had neither small pox nor vaccination before.

In 1818 and '19, during the prevalence of small pox and varioloid in Edinburgh, there were more deaths among those who had small pox before, than among those who had been vaccinated. At Norwich, in 1819, the same facts were observed. If there were a parallelism proved between second attacks of small pox and revaccination, and there is certainly good reason for believing that the parallel holds good, the following facts observed at Wirtemberg are of interest: of 297 persons who were pitted by small pox, 95 took vaccination perfectly; in 76 it was modified, and in 126 produced no effect. These facts seem to show that 32 per cent. of these numbers were liable to second attacks of small pox.

Dr. Gregory thinks that between the ages of 5 and 15, since vaccination was introduced, small pox is a rare disease. Among the unprotected, he thinks the ratio is 1 to 2, and among the protected, 1 to 7. These figures appear to be too low in the first class, and too high in the second. The statistics of other observers vary widely from those of Dr. Gregory. The fact is, Dr. Gregory has usually exhibited, in his tables and controversies on vaccination and small pox, much more of the temper of the partisan, than of the spirit of the philosopher. His treatment of Dr. Baron, on the vaccination report to the Provincial Medical and Surgical Association, in 1837, was disgraceful in the extreme, and was well calculated to bring all that Dr. Gregory says on small pox and vaccina-

tion into disrepute. But his tables and statements shall continue to appear in this essay, because my desire is to present every thing of interest that has been said on the various subjects that are discussed in this paper. But to return:

Dr. Schleisner, in his Medical Notes on Iceland, says: "one interval of 34 years occurred between two visitations of small pox, in Iceland, and *many* old persons who had the disease in the first epidemic, had it again in the second."

In the Report of the National Vaccine establishment, to Sir Robert Peel, in 1830, it is stated that small pox had prevailed epidemically, in various parts of England for twelve months, and that 28 well authenticated cases of second attacks of small pox had come to the knowledge of the Institution.

In 1828, in an epidemic small pox in Marseilles, France, of 2,000 cases, 20 were second attacks, and of these 4 died.

In Philadelphia, Pennsylvania, a committee appointed, in 1827, to make a Report on small pox and vaccination, state that of 101 deaths from small pox, 10 were after vaccination, and 9 from second attacks of small pox.

The facts are before the reader for his study and inferences. Those, that are detailed in this portion of the essay, bear upon every thing that a careful search could find on the phenomena of second attacks of small pox, from the present, up to the days of Jenner.

Art. V.—*The protective power of Vaccination.*

The investigations of this essay have reached much the most pleasing, gratifying and cheering of the subjects that belong to the present inquiry. It is a matter of no small moment to ascertain the true position of the protection

afforded by vaccination, against small pox. An old physician of London, Dr. Fordyce, who flourished at the time the public mind was agitated with Jenner's discovery, and the violent opposition it encountered, was asked by a friend at a London coffee house, which Dr. Fordyce often visited for the purpose of drinking Port wine, what he thought of vaccination. "I should be very happy," replied Dr. Fordyce, "to give you my opinion on that subject, fifty years hence." The probationary period desired by Dr. Fordyce has expired, and in looking back upon the events of the past fifty years, in connection with small pox and vaccination, we are prepared now to say whether vaccination has been useful, how far it has redeemed the promises of its early friends, and what measure of confidence should be meted out to it. There are few medical inquiries of greater magnitude. On the subject of the early benefits of vaccination there is no kind of doubt any where, but fears are entertained that it is losing its prophylactic powers, and that it may finally cease to be of any efficacy. Many have indulged the fear that small pox and varioloid are increasing among the vaccinated, because the matter used in vaccinating is getting weak, and the hope is fostered that all the evils are to be cured by a resort to the cow again for vaccine virus. These are illusions, however, that will claim attention under their appropriate head.

There is reason to doubt whether vaccination, when surveyed in its completeness is any more uncertain now than it was originally. The world no longer hears of such terrible visitations of epidemic small pox as formerly devastated the earth. In all communities in which the disease appears, large masses of the people are as exempt from the malady as though it were not in existence, and individuals can be protected now from small pox, with as much cerrainty as at any period of the career of vaccination. When the disease shows itself in any region, its

ravages can be checked, and held in abeyance. Vaccinated infants can now suck the mother who has the small pox at the time, with as perfect impunity as at any time since Jenner announced his discovery. When unvaccinated persons have been exposed to variolous contagion, they can be as perfectly secured against the disease, as any persons ever were. And vaccination has just as much power to rid the world of small pox as it ever had. No one of the histories of small pox and varioloid epidemics, records the statement that small pox *commences* its ravages among vaccinated persons. It gets its foothold among the unprotected, and then finds only an occasional victim among the vaccinated. These are the truths that are now to be developed in a series of observations gathered from all parts of the world. I ask the reader's deliberate attention.

In all those regions of the earth that were formerly subject to small pox visitations the good effects of vaccination were prompt, decisive, and recognizable. In Norway, the beneficial results of vaccination were so marked, that there was not a case of small pox in that kingdom for ten years, after the introduction of the prophylactic. So entirely exempt were all classes, from fear of the disease, of which they once stood in awe, that the teachers of medicine had ceased to refer to its existence, in lecturing to their classes. This fact shows how perfectly the kingdom was released from visitations of the pestilence. In Denmark, Sweden, Prussia, Austria, Russia, Italy, Spain, France and England, the results of vaccination were in the highest degree interesting and satisfactory. Jenner lived to hear that 230,000 of the Chinese had received vaccination, and one of his friends pleased him greatly by sending him a pamphlet, in the Chinese language, in which was developed the Jennerean doctrine.

The Royal Vaccine establishment, of England, reports, that in seven years 83,647 persons were vaccinated in

England, and of that number only 2 deaths from small pox were authenticated. The Report says, that of 10,000 persons vaccinated, probably not more than 5 die. It is not a little singular, that the English did not pay more attention to the cause of vaccination. While thousands were perishing annually in the heart of England, under the very eyes of the government, for the want of a little Parliamentary attention, British philanthropy was expending all its sympathies upon the negroes of Brazil, Jamaica, and the southern states of North America.

Dr. Hennen, a military surgeon in Wellington's Peninsular campaigns, bears decided testimony. He says: "Small pox has raged around our camps and barracks, and carried off its victims under our very walls, and even from houses where our detached troops were quartered, while it has left them unmolested."

Mr. Field, surgeon to Christ's Hospital, gives the statement, that of 1,877 children, in that Hospital, all between 7 and 15 years of age, during a period of ten years, there was only one death from small pox.

In 1845, a commission consisting of Magendie, Roux, and Serres, reported, that after three years investigation of the subject, facts showed that the preservative power of vaccination was general in its good results.

Dr. Bosquet give the results of 30 epidemics, between 1816 and 1841. The number of persons unvaccinated, attacked with small pox, was 10,434, of vaccinated persons 5,963. Of the former, 1,682 died, or nearly 17 per cent. Of the latter class, 62 died, or a little more than 1 per cent.

The district of Rezat, in Bavaria, containing a population of 500,000 inhabitants, extirpated small pox so completely, that from 1807 up to 1824, there was not a case of the disease.

In France more than 2½ millions of people were exempt from small pox for 13 years. There was not one victim

to the disease, in Philadelphia, in 1812, '13, '14, '15, '20, '21, '22. The report made by the committee, appointed in Philadelphia, to report the facts, in their possession, on the subject of small pox, shows the inestimable value of vaccination. Various other American cities show results in the highest degree satisfactory.

In Holstein, Dr. Luder says: "in 234,959 vaccinated persons, between 1801 and 1822, there was not a case of small pox; up to 1824, only 2 cases. In Denmark, for the same period, out of 447,605 cases of vaccination, there was but one case of small pox.

Dr. Kinnis, in a survey of small pox attacks in Ceylon, bears strong testimony to the beneficial effects of vaccination. In 1819, there were 7,874 cases, and 2,945 of the number died. In 1830, after vaccination was extended partially over some of the districts of the island, there were 896 attacks of small pox, and only 167 deaths. But mark the differences. In the maratime districts vaccination was generally used, and in 1830, in 1,030 attacks, there were 147 deaths. In the Kandyan district, vaccination was little used, and in 198 cases of small pox, 110 died. In 1819 there were 100 attacks for every 10 in 1830, and for every 10 that died in 1830, 176 died in 1819. If vaccination had been universally diffused in Ceylon, in 1819, and 1830, 9,000 lives might have been saved.

The reader has only to apply these facts to all parts of the world, to reach proper conclusions. The features developed in the statements here presented, are in accordance with universal observation, and it is not deemed necessary to burthen this paper with statements that would only confirm the view obtained from those given, without throwing any additional light on the subject. These cases have not been selected to sustain a partisan view, but to show the actual bearings of vaccination. As far as the demands and results of revaccination may be considered as militating against the early claims of the

friends of vaccination, those demands and results will exhibit the per contra of the benefits of vaccination.

Before passing, however, from a review of the facts which show the protective power of vaccination over districts of country, among large masses of people, it will not be amiss to look into its influence upon individuals. This examination will have the double power of showing the value of vaccination in individuals, and of preparing the way for a consideration of the present value of the matter used in vaccinating.

Art. VI.—*Influence of Vaccination upon Individuals.*

Mr. Elwin reports a case where an unvaccinated child had small pox. There were three other children, all young, in the same room with the disease, and they had never been vaccinated. *Seven* days after exposure to the infection, the three children were vaccinated successfully, so far as the vesicles were concerned. Two of the children had eight small pox pustules, and the third, an infant, escaped the disease.

During the epidemic small pox, that has prevailed in Louisville this season, I have seen many examples of vaccination which show that its prophylactic powers have not deteriorated. I will name the characteristics of one example, as an illustration of those of many cases, merely remarking that I have seen nothing that throws even a suspicion upon recent vaccination. It seems to do as well now, as it did when Jenner first announced its benefits. The example to which I have referred as illustrative of many, occurred on Third street, in this city. The oldest of three children in a German family, was attacked with a violent convulsion, accompanied with intense fever. At my first visit, I suspected that the case would turn out to be variolous, and at the end of forty-eight hours, my supicions were justified. The two children, younger than

the sick one, slept in the same bed with him, up to the time of eruption, and two days after that was developed, I vaccinated the two children. It was successful with them; revaccination was equally so with the mother, and the father failed to take revaccination, though the attempt was made. All the family, with the exception mentioned, escaped varioloid and small pox. And I saw numerous instances in November and December of 1850, equally as palpable as these in showing the value of vaccination.

Mr. Taylor mentions that the protective influence of vaccination was well manifested at Crickland, England. Among other evidences, he mentions a fact which shows that a common opinion among medical men, that a person who cannot take vaccination, is not in danger of small pox, has its limitations. Mr. Taylor says: "of four children exposed to infection during the epidemic, two took vaccination, and it failed in two; the latter of the two classes had small pox."

I repeat that during the present epidemic of small pox, in Louisville, I have seen nothing to shake my thorough confidence in recent vaccination. Other departments of this subject will develope additional facts on the value of vaccination, and they shall be attended to in their proper places.

There is one point of a highly important character, which should be impressed upon the mind of the practitioner in small pox cases. I allude to *the modifying influence of vaccination*, even when *small pox is in the system.* This is a point that is too much neglected, and the neglect arises often from erroneous views of revaccination. The testimony of the power of vaccination in modifying small pox, even when the constitution has imbibed the contagion, is very conclusive.

Dr. Tardieu mentions a case, which he vaccinated after the small pox eruption appeared upon the skin, and it was materially modified by the vaccination.

Mr. Gardner, at the Mauritius, speaks of the excellent effects of vaccination, in modifying small pox, in those suffering with the disease, and in protecting those who had been exposed to the contagion. Mr. Markwick bears strong testimony on these points.

Mr. Metcalfe says: vaccination may be performed after great exposure, after maturing, the small pox may show itself, but if it does, it will be in an abortive form.

Mr. Marston reports a very interesting case, which appears to say that the child referred to was a candidate for small pox, with purpura, and that its chances for getting the disease were very fair. Mr. Marston is surgeon to the Vaccine and small pox Hospital, London. He vaccinated a child, 4 years old. The day following, the five vaccine vesicles were all of a dark mahogany color. There was hemorrhage from the nares and ears; purpura on the face, neck, trunk and extremities. But the case was mild. With this hemorrhagic tendency, if small pox had been taken in the natural way, this child must have died. Those who wish to see a description of small pox, in its most horrid form, may do so by reading "an abstract of a paper, on small pox, complicated with Purpura Hemorrhagica," read before the Obstetrical Society of Dublin, March, 1850, by Mr. Collis.

The case reported by Mr. Marston, quoted above, is another of those incidents which meet the investigator of small pox and vaccination, that seems to show the identity of the two affections. The tendency of small pox to develope purpura hemorrhagica, and the developement of that state of things in Mr. Marston's case, by vaccination, show a relationship that can scarcely be called accidental.

A correspondent of the Boston Medical and Surgical Journal, in 1849, in speaking of an epidemic small pox in Chester, N. H., says: "of 46 cases, 23 were among the unvaccinated, and 23 among the vaccinated. The latter

have been very mild; *some of them merely the symptoms without an eruption*, others more strongly characterized. Of the unvaccinated, many have been very severe; some of them the benign, others the distinct, but a majority the confluent or a combination of the two latter forms." I am at a loss to know what this medical correspondent means by cases of small pox without any eruption. It is a medical solecism which is inexplicable. The only pathognomonic symptom of small pox is the eruption; it is that alone which enables the physician to recognise the existence of the disease, and when it is absent, the disease is absent. If vaccination prevented the eruption of small pox in some of the cases at Chester, it performed its proper mission—it prevented the disease in those cases. An eruptive disease without an eruption is an absurdity. It is the play of Hamlet, with the part of the Prince omitted. Those symptoms that are said to constitute variolous fever without eruption are common to small pox, measles and scarlatina, and when these three diseases are prevailing together, as they often prevail, I should think it would be a matter of some difficulty, for even the facile diagnosis that recognises eruptive diseases without the eruption to tell which form it was deciding upon.

Dr. Lombard says; in the *Gazette Medicale*:—In the department of L'Ariege, where small pox has been prevalent for several years, and recently with much severity, a hundred and twenty vaccinations were practiced in a period of six weeks. Of this number of infants, not one was attacked with small pox, while others died. Even where small pox was developed to a certain extent, vaccination exerted a favorable influence. M. Lombard states that in those persons in whom variola appeared, and who had been vaccinated some time previously, the severity of the disease increased with the length of that interval. M. Lombard concludes in favor of revaccination.

Dr. Schäffer reports in the *Medicinische Zeitung*, that

in a Prussian district, the small pox attacked 139 persons in 8 years; 47 of the number had not been vaccinated, 92 had been. Of the unvaccinated 15 died, of the vaccinated one died. 121 persons, who had been vaccinated, nursed the sick, and no one of them caught the disease.

Throughout the epidemic of small pox that has prevailed in Louisville, this season, I have known great numbers of vaccinated persons, expose themselves freely to the contagion of small pox, and the great mass of them escaped as perfectly as though they had been nursing cases of chill and fever. I have seen a larger proportion of persons who had been vaccinated attacked with small pox, this season, than I have ever seen before. But I have also seen a much larger portion escape than at any former time, for I have seen many more expose themselves in this epidemic than at any former period. My observations during this epidemic have strengthened my confidence in vaccination. The per centage of attacks, when the vast number who escaped are considered, is exceedingly low. In fact, different countries present a riddle for solution, in the great differences observed in susceptibility to revaccination, and to small pox after vaccination. In some regions a majority of vaccinated persons can be successfully revaccinated, and in such places, a great susceptibility to small pox and varioloid, after vaccination, manifests itself. In the various States of this Union vaccination exerts a more extensive and enduring power, than in any other part of the world. But more of this, in a more appropriate place.

Art. VII.—*Vaccine Scars.*

A great many persons are in the habit of pronouncing a judgment on the qualities of an old vaccination, by the character of the scars. This is too important a branch of the subject of this essay, to be passed by without

investigation. It is of more than ordinary moment to determine whether the scar affords any means of deciding a former vaccination to be a good or a bad one.

It is very questionable whether any marks are left in the skin by vaccination which give positive indications of the character of the vesicle. A large, irregularly shaped scar may be safely pronounced a defective one, but then the most perfectly formed scars are often proved to be defective, by an invasion of small pox. An American medical professor, Dr. Miller, of Baltimore, announced some years ago, that the infallible marks, were pits in the vaccine cicatrix and grooves in the variolous scar, and he declared that as soon as these marks began to disappear, a susceptibility to small pox was approaching. Time and extended observation have proved the fallacy of these tests.

Mr. Hutchinson, of the Foundling Hospital, reports a number of revaccinations. Eleven cases went as regularly through the second vaccination as though they never had had the disease. Eight of the eleven presented perfect cicatrices from the first vaccination, while in three arms, in which there was no trace of a cicatrix left, although it was well known that they had all been vaccinated, the revaccination failed though tried twice.

In a record of 134 cases of vaccinated persons exposed to small pox, 57 escaped the contagion, and the remaining seventy-four yielded to it. Seven of the whole number had, what are considered perfect marks, and one of these took the disease. Twenty-eight had tolerable marks, and fourteen of these caught the small pox. Of 77 with imperfect marks, 30 escaped the influence of the contagion, and of 22 with no scars, seven escaped.

The physicians of Wirtemberg, who enjoyed excellent opportunities for observation, believe that no safe conclusion can be drawn from the marks of the cicatrix, and, although I once had full faith in those marks, subsequent

experience has satisfied me of the correctness of the opinion of the Wirtemberg physicians, and no prudent physician would decide as important a question as the security of an individual against small pox, by indices as uncertain as those of the vaccine cicatrix. I have seen varioloid in persons who had excellent scars.

ART. VIII.—*Revaccination & Small Pox after Vaccination.*

A bitter controversy raged a few years ago, in England, between the intimate friends of Jenner, and those who felt strong inclination to lower vaccination below its real merits. In this controversy a great many interesting facts were developed, and most thoroughly sifted. Amidst the angry passions of the controversy valuable truths came into existence, and we may now gather useful lessons from them.

The remarkable degrees that have been observed in the susceptibility of individuals to small pox and vaccination are very curious. While there are some persons who seem never to lose the susceptibility, but promptly catch small pox every time they are exposed to it, no matter how often that may be, there are others who never possess the susceptibility. They neither take small pox nor vaccination. Mr. Bigges, of Newark, England, knew 4 persons, of both sexes, in one ward, in that city, who resisted frequent exposures to small pox. They were past middle age, and one of them slept with his child covered with eruptions. Twelve persons, in Newark, have always resisted inoculation, often repeated, and eleven others had equally resisted vaccination. I know several persons of the unsusceptible class in this city, and two of the number are old citizens. But the reader must be guarded against an error here. Those who have a latent susceptibility must not be confounded with those who have none. I have seen cases resist twelve, fourteen, and even twenty

attempts at vaccination, but they were finally brought under the influence. An interesting case of this latent susceptibility presented itself this season, in the person of the second daughter of Professor Silliman. Attempts to vaccinate her commenced when she was three weeks old, and were continued without success until this season. These attempts amounted to twenty, spread over between three and four years. I made several efforts to vaccinate this case, and used fresh matter each time. I succeeded finally, and never had a finer vaccination.

A common opinion prevails that where a strong insusceptibility to small pox exists, the insuscepibility to vaccination is equally as strong. There is a good deal of probability in the opinion, but it should not be tried too far. In matters of this kind it is not safe to assume that apparent parallelisms amount to proof of positive identity.

But let us survey the phenomena connected with small pox after vaccination. It is supposed that vaccination loses its power after a certain number of years, but there is no analogy in physiology or pathology, on which such an opinion as this can be based. The phenomena upon which the idea is founded, occur in small pox, but that never wears out. If there are cases, as we know there are, who can be successfully vaccinated two or three times in rapid succession, while others lose all susceptibility after the first vaccination, and if the common practice is to dismiss all children with a single vaccination, must there not, *ex necessitate*, be a large amount of latent susceptibility left among these vaccinated persons? This latent susceptibility is clearly recognised in those persons who resist vaccination a long time, but finally yield to it. It is not all destroyed by one vaccintion, in all cases. Suppose that 700 persons are vaccinated in a district of country; that of this number four hundred have all susceptibility to small pox destroyed

by one vaccination; that in others the susceptibility is modified, in others not affected by one vaccination, should we not be justified in looking for the same results we find among the vaccinated? Large masses of them are entirely exempt from all danger of small pox, at once and forever, others have attacks of small pox so mild that it is difficult to recognise the disease, and, from these mild shades, the phenomena pass off into the deepest shadows of confluent portraitures. Precisely similar phenomena present themselves in revaccination. This whole subject requires a great deal of patient observation, and rigid analysis. There are certain irresistible laws in all of Nature's works, which are a riddle to all physical geographers. Such, for instance, as that universal and unchangeable law of the human races, announced by Bouè, in connection with the trends of mountain ranges. All over the earth, where mountain ranges extend from north to south, there is a greater fusion of languages and customs, among the inhabitants, than where the range runs from east to west. Take the mountain range between Hungary and Poland as an example of the first; that between England and Scotland, as the last. In one case there is universal antagonism, in the other, universal tendency to fusion. These differences are independent of altitude, and seem to depend on the direction of the range. But it is as utterly inexplicable, as anything we know of in medicine. The proper elucidation of the small pox susceptibilities, however, would require a great deal more space than I can spare now. I have indicated what I believe to be a true solution of the subject, and it is certainly a safe one, for it leads to proper practice. But in making inferences from the facts and tables, which I am about to submit, I pray the reader to remember that the important element of the immense disparity, in all communities, between the numbers of persons protected against small pox by vac-

cination, and those by small pox itself, must be kept before the mind, if the object is to learn the truth.

In Marseilles, in 1828, there were 30,000 persons who had been vaccinated. An epidemic small pox appeared, and 2,000 of the vaccinated were attacked with varioloid or small pox. There were 2,000 persons attacked with small pox, and of this number 20 were second attacks, and four of these died.

Of deaths from small pox in Sweden, after vaccination, the following tables are given:

In 1822, 103 persons, all over 15 years of age.

In 1835, 47 persons, between 19 and 35 years of age.

In Copenhagen:

In 1828–'29, 29 persons, all adults but one.

In 1832, 10 persons, all above 22, and not one case even of the disease among the revaccinated.

The relationship between second attacks of small pox and attacks of small pox after vaccination, is too close to be passed over. The following tables, made in Prussia, possess interest.

In the Prussian army, there were second attacks of small pox,

in 1834	619	38	deaths.
1835	259	5	"
1836	130	9	"
1837	94	3	"

That there is an approach to parallelism in certain lines of small pox after vaccination, and in second attacks of the disease, all must admit. I do not undertake to say, nor would I wish to be understood as inculcating anything more than that there is a necessity for a close and well conducted observation of these points. The following table may awaken some attention to the subject. It is gathered from different parts of Heim's report, and he seems not to have noticed how singular the numbers

look when brought together. The numbers are founded on observations in 100 cases:

	with success.	modified.	failure.
Vaccination after small pox	32	26	42
Revaccination	34	25	41

If successful revaccination shows that a small pox susceptibility still lingered in these constitutions, the success of vaccination after small pox, shows the same thing.

While on the subject of parallels, another interesting set may as well be mentioned. In another part of this paper, I referred to a case where a person was inoculated, but who failed to take the disease. A single pustule, at the inoculated place was all the sign of the disease, in the subject of the attempt. But matter was taken from this pustule and inserted in the arms of some children, and they took the disease. The children who furnished this small pox matter that gave the disease to others, without having the constitutional affection themselves, were reinoculated with matter obtained from the second set, and in the new trial they took small pox. The analogous case to this, in vaccination, was furnished by Dr. Jenner, and would serve to show, even in the absence of the proof furnished in a former part of this paper, how well Jenner knew the fact that vaccination did not always protect from small pox. In a letter to James Moore, in 1817, Jenner says: "a female had been vaccinated by means of a single puncture—a good vesicle appeared—from this several of her neighbors were vaccinated at different times during its progress. The woman caught the small pox, and had it severely. This excited alarm among those who had received the infection from her; they were all subjected to variolous inoculation, and all resisted it." A singular parallel also, to this is mentioned by Mr. Berry—two children were vaccinated when quite young. Some years after the small pox was violent in the neighborhood, and

the mother was so alarmed, that she wished her children inoculated. Her request was granted—a pustule formed on each child without affecting the constitutional health of either. But from these two pustules numbers were inoculated, and they took small pox.

Now these, and various other analogies between small pox and vaccination are not accidental; nor does the fact that the analogies fail in some particulars destroy the truthfulness of those points where they do not fail.

The fact of the varying results of revaccination, in different countries has already been mentioned, and these variations are seen also in different parts of the same country. In some places the following is assumed to be a law: "before it became customary to revaccinate, when small pox entered a family, it went through it, but its progress is now arrested by revaccination." This is not true in this country. I have seen various instances where small pox attacked a member of a large family, and about whom there was no restriction. None of the rest of the family took the disease, nor was anything done in the way of revaccination. Exemption is often claimed as due to revaccination, when it had nothing to do with preventing the disease. If revaccination had been resorted to in the cases just mentioned, their protection would have been ascribed to it, when it is evident that they were as well protected without it as they could have been with it. Nor does successful revaccination prove that the subject of it was in a condition to take small pox, until protected by revaccination. At the Hospital at Heilbruren, two sisters were admitted, one with varioloid. The other sister nursed the sick one, and slept two nights in the same bed with her, and they occupied the same room five weeks. Some time after this, the nursing sister was successfully revaccinated, but it is plain that it had nothing to do with her protection. But sweeping conclusions must not be

made from isolated facts—the footstalk is too weak to support too large a head.

In the investigations of revaccination, there is abundant proof that it is the wisest and safest course to submit to the requirements of revaccination. Hecker says that since revaccination has been introduced into Prussia, and attended to, small pox has almost disappeared from the empire. In the same kingdom it was remarked, that during an epidemic small pox, those divisions of the army that were revaccinated escaped, while those which were not taken through the process suffered severely. In Prussia and Wirtemberg, of 91,516 revaccinations, 41,-663 were perfectly successful. In Wirtemberg, in 6 departments, in each class of 100 cases of revaccination the averages were 46 successful, 20 modified, and 34 without any effect.

In Prussia, the following results of revaccination were observed:

In 1833—31	per	cent.	successful.
" 1834—37	"	"	"
" 1835—39	"	"	"
" 1886—43	"	"	"
" 1837—45	"	"	"

In 1843 an epidemic small pox was arrested by revaccination, and the revaccinated were almost entirely exempt from attacks.

Heim shows conclusively that revaccination, at once arrested the spread of small pox in the garrisons at Ulm, Stutgard, and Ludwigsberg. It was used without any regard to the cicatrix.

Lurot, a French physician at Bischwiller, made a number of interesting experiments in order to ascertain the truth of Heim's conclusions, and they were amply corroborated. Indeed, the facts every where seem to justify a rigid attention to revaccination, at the proper times. Where it is successful it should command some confi-

dence, and where it fails it does no harm. There is one consolatory fact in revaccination—no matter what the theory may be as to the call for it, whether it be from the wearing out of a previous protection, or from the remains of an imperfect vaccination, or from a latent susceptibility that has not been previously destroyed, revaccination is imperative, and the consolation is, that if the lapse of time renews the susceptibility to small pox, it equally renews the susceptibility to revaccination.

In 1842, the French Academy of Sciences offered a prize for the best treatise on the value of vaccination and revaccination. Thirty-five candidates presented themselves, and it was not until 1845 that M. Serres was able to present a report to the Academy. The following portions of the report are valuable:

"Vaccination preserves the human species from variola, but its preservative power is not absolute. Variola itself, either spontaneous, or produced by inoculation, does not preserve absolutely from future attacks, therefore it is not extraordinary that vaccination should not. Thus, Mead mentions having seen three variolous eruptions take place successively on the same woman: the son of Forestus was twice attacked with variola, and Dehaen states that one of his patients was attacked six times by variola with impunity, but died of a seventh invasion of the disease. Although, however, vaccination is *sometimes* powerless to preserve us from variola, it *always* diminishes the gravity of the malady. This property, which Jenner and his first successors did not even suspect, is thoroughly proved by the various facts which have been recently accumulated. In one of the most terrible epidemics of variola that has taken place in Europe since the discovery of vaccination,—that of Marseilles, in 1828,—more than ten thousand persons were attacked. Of these, two thousand only had been vaccinated, and of that number forty-five only died, whereas, one thousand five hundred

of the eight thousand who had not been vaccinated were carried off by the pestilence.

"Vaccine matter evidently loses part of its efficacy in passing from arm to arm: it is therefore desirable to renew it as often as possible. A remarkable fact mentioned by one of the competitors, supplies us with a means of renewing it, as it were, at will. A cow was vaccinated with matter taken from a child. Not only did the pustules rise, but they were communicated to other cows, so that the cow pox was observed nearly in its natural state. The pustules were identical in both cases.

"The propriety of revaccination is now fully established. In Germany, the various governments have been induced to pay great attention to revaccination, owing to the circumstance of epidemics of variola having latterly manifested themselves with a severity to which we had become quite unaccustomed since the introduction of vaccination. Revaccination has, consequently, been resorted to on a very extended scale, and has had the effect of arresting the epidemics. Thus, in Wirtemburg, forty-two thousand persons who have been revaccinated, have only presented eight cases of varioloid, whereas, one-third of the cases of variola have latterly occurred on persons who had been vaccinated. It is principally between the ages of fourteen and thirty-five that vaccinated persons are exposed to be attacked by variola. When there is an epidemic, the danger commences earlier, and children of nine years of age may be seized. Prudence, therefore, requires that, under ordinary circumstances, revaccination should be performed at the age of fourteen or fifteen, and four years earlier if within the radius of an epidemic of variola."

The reader who has paid attention to the facts presented in this paper, respecting Jenner's views of vaccination, and the liability to small pox afterwards, cannot fail to see how carelessly M. Serres had read Jenner's

works. It will be remembered that Jenner declared that when small pox attacked a vaccinated person, the disease would be modified in its character, the very fact which M. Serres says Jenner did not even suspect. When I examine the subject of the renewal of the vaccine virus, I shall be compelled to dissent from another of the opinions of M. Serres.

Art. IX.—*Present Value of Vaccination.*

The attentive reader, who has carefully analysed the preceding facts on the subjects of small pox and vaccination, can be at no loss in determining the present value of vaccination. I have no doubt that in the great mass of persons, who are properly vaccinated, vaccination exerts as great prophylactic powers as at any period of its career. It never assumed to be a better protection than small pox itself is, and the strong probabilities are that it is now as useful as it ever was. If the number of chances for attacks of small pox in a community are diminished by vaccination, the number of chances for small pox after vaccination must be increased, and it is unfair to take one element of these statistics, and base an opinion alone on it. Yet this has been constantly done by Dr. Gregory and his followers. Before we can say anything of the comparative per centage of second attacks of small pox, and of small pox after vaccination, we must know the numbers in the community relatively exposed in each class. And another element of calculation leads to constant error. It is necessary to know the circumstances under which the figures were obtained, and I can imagine few worse places for gathering them than military barracks or a small pox hospital. When Sir James McGregor or Dr. Gregory says that of 100 cases of small pox after vaccination, 60 will be mild, 40 confluent or severe, a physician who has seen the effect of congregating numbers of small pox

patients together, can understand the extraordinary character of the figures quoted. Such proportions are never seen in private practice. Mild cases of varioloid or small pox may easily be made grave by placing them in a crowd of cases. I have seen many instances of this kind.

In every community the great majority of vaecinated persons may expose themselves to small pox contagion without any risk. Various facts detailed in this paper clearly show that fact. The reader will remember one instance where 121 vaccinated persons nursed cases of small pox and no one of them took it. A private practitioner who sees the numbers of persons who expose themselves to small pox, with impunity, might conclude that vaccination was almost a perfect protection. In private practice too, the number who successfully take revaccination, according to my observation are a mere cypher. But let me not be misunderstood—it should be tried in all exposed cases, for there is no other way by which any can tell who is and who is not safe. The general observation of medical men throughout the world seems to sustain these conclusions: from early life up to about the 10th year, and from that to the 15th year, primary vaccination exerts its full power. Retzius, of Stockholm, thinks that vaccination retains its power about 13 years; that revaccination lasts in full power up to the age of 40, and manifests some decadence towards the fiftieth year. If these statements were universally true, they would show that the revolutions of the system have a great deal to do with the supposed changes in vaccination. I have never seen but one case of varioloid within less than the 11th year of the vaccination, and I think that universal experience sustains Wendt, of Denmark, in his opinion, that time has its influence upon vaccination. His numerous and well arranged tables sustain that view, but I have not the space to spare for them, and the reader is mainly

interested in the conclusion. I have seen, in this season, in Louisville, mild attacks of small pox about the 15th year of the patient; in those whose vaccination was 20 years of age, the cases were more severe, while in those whose vaccination was 30 or 40 years old, no modifying power was perceptible. These observations have been constantly sustained this season. Whether it is the relative ages of the patients, or of their vaccinations that makes these differences is not firmly established. In an epidemic small pox, revaccination should be general, without regard to definite years, for they are not fixed as immoveably by nature, in reference to susceptibility to small pox, as they are in the multiplication table.

Dr. Cape, of St. Thomas's Hospital, thinks, that one revaccination, immediately after the age of 15 would be sufficient for the remainder of life.

But in order that a community shall enjoy the full value of vaccination, they should secure a more rigid enforcement of it, and a better attention to it, than usually prevails. I showed the effect of the English Vaccination bill, of 1840, in the rapid decrease of small pox, in London, year after year, immediately subsequent to the passage of the bill. In all parts of England, the good effects were rapidly perceived. Thus, in Stockport, a town often afflicted with small pox before the bill was passed, and containing a population of 10,000 persons, not a case was registered for two years after the vaccination bill passed. *There are more imperfections in the modes of vaccination than in the vaccine virus.* Jenner noticed, very early, that while almost all that he vaccinated were safe, those vaccinated by others were not generally secure. I have been curious in a close investigation of the subsequent fate of Jenner's cases, and have been struck with the fact, that while the friends and enemies of vaccination have given very minute details of all that could be found for and against the cause, from the death of Jenner, in 1823,

down to the present time, I have met with the record of the occurrence of small pox, after vaccination, in but one person who had been vaccinated by Jenner, and that vaccination was 23 years before the attack. Governments should enforce vaccination. Its importance cannot be estimated properly by the ignorant, but they should not be permitted to poison the atmosphere of other people. The Registrar for Nottingham, England, states that a woman in his district who had lost a child by small pox, assured him that she would rather lose half a dozen children by it, *than fly in the face of Providence in having one vaccinated.*" She may have many analogues in this country.

The rules prescribed by Jenner are almost unknown to great numbers of vaccinators, and the marks that distinguished a genuine vesicle from a spurious one are very imperfectly known, and when known are seldom attended to. But upon a matter of the momentous importance of vaccination, the strictest attention should be given.

Has the Vaccine virus Weakened?

A great many persons have cut the knotty points connected with small pox after vaccination, by assuming that the vaccine virus now in use is so far removed from the cow, that it is no longer efficacious, and the opinion is entertained by some persons, that a resort to the cow again, would restore the vaccine virus to all its original strength. Such reasons spring from a very imperfect knowledge of the subject, and a few irresistible facts will clear the matter of its errors. There is no reason for believing that the humanised vaccine virus has power in any degree inferior to that used by Jenner. As long as it makes the proper vesicle, and possesses the characteristics pointed out by Jenner, it is equal to all that he ascribed to it. But here is a point that should settle the question:—if an epidemic small pox appears among adults vaccinated

forty years ago, it is evident that the matter with which they were vaccinated was nearer the cow, than that used now, by forty years. And what are the facts exhibited among them, and among children vaccinated with matter forty years farther from the cow, than their's was? Those vaccinated with matter the farthest removed from the cow, are all saved, while the adults vaccinated with matter nigher the cow, suffer. The London Vaccine Institution now use matter in its regular transmission through human beings, from that originally furnished by Jenner, and the officers of that establishment declare that the virus has lost none of its power. The matter used in various parts of Europe, is in regular descent from that obtained from Jenner, and such is the fact of that used in this country. As long as it will produce the vaccine disease perfectly, it is equal to that obtained from the cow, for it can do no more. The best judges of vaccination declare that new virus from the cow produces no better vesicles than the virus in common use, and some of these judges were the intimate companions of Jenner. Gregory says forcibly: "recurrence to the cow for fresh lymph is not a measure lightly to be had recourse to, nor should it be advisable until the old and tried stock has obviously degenerated." The world would run the risk of getting spurious lymph from the cow. GRIVA, of Italy, says he "can see no perceptible difference between the fresh lymph, and that which has been long humanised." In France, eleven vaccine committees, and 170 private practitioners concur in declaring that "the humanised old matter is as good as the new." This matter has been as effectual in Louisville this season, as Jenner's was in Gloucestershire, in 1806. It has afforded perfect protection in all recent vaccinations.

The proper time for Vaccination.

Dr. Murray, of the Cape of Good Hope, and Mr. Grantham, think that vaccination is performed too early in life, and the former gentleman quotes Munro in proof of the fact that young children are not very liable to small pox. I know of no good reason for such an opinion—infants that are exposed to the contagion, so far as I have had an opportunity of seeing such cases, are as liable as children of any age. I have vaccinated infants immediately after their birth, before they were dressed, and vaccination seems to do as well with them as with others, and I have seen such cases exposed sixteen years afterwards to small pox, without taking the disease. If there is exposure or liability to it, the age should not be thought of. Mr. Howison, vaccinator to the Royal Dispensary, thinks that from 1 month to 1 year is the proper time, and balmy pleasant weather more favorable, than any other kind.

Mr. Delfraysse, in a memoir submitted to the Academy of Medicine, Paris, Oct. 8th, 1850, undertook to show why vaccination fails. He thinks that vaccination is infallible, where the vesicles are sufficiently numerous to produce a degree of febrile action. He proposes 20 or 30 punctures in different parts of the body, and says that he exposed cases thus vaccinated, to the greatest degree of contagion, without any evil consequences. But he might have done this equally as safely, if he had made but one puncture, for recent vaccination, with one puncture, is an ample protection. But I think that it would be an improvement to vaccinate children, at various intervals, as long as they show any susceptibility to vaccination, for all the susceptibility is not destroyed in all children, by one trial. But the multiplied punctures commended by M. Delfraysse are not quite as harmless as he thinks them.

Mr. Rees, in the London Lancet reports three cases of sloughing from numerous vaccine punctures—some 12 or 15 in each arm. Two of the children died, and the third was saved with great difficulty.

Drs. Gregory and Colles think a child may be safely and properly vaccinated, when two months old. Heim is in favor of waiting twelve months, and not deferring it beyond the third year. But there is no good reason why a physician should bind himself to any of these rules. Nor is there any reason for believing that a vaccine scab can communicate any other disease, than the cow pock, even if taken from children laboring under scarlet fever, measles, hooping cough, scrofula, or anything of the kind. Physicians are often charged with giving scrofula to children by vaccinating them with matter from scrofulous children. It would be as rational to charge any other subsequent event of a child's life, to the same cause.

Beeker thinks that vaccination is less active in summer than in winter. Of this there is no doubt. During the hot dry weather of last July and August, at least 18 of 20 attempts at vaccination, in my hands, failed. As soon as the weather turned cool, at least 18 in 20 succeeded. Robert Annan, of Kinross, Scotland, has recorded similar occurrences in June and July, 1850, in Scotland.

Incubation of Vaccination.

The usual period of this is well known, but great variations are often noticed. The *Journal Universel* mentions a case where four punctures were made; there was no development for two months, the vaccination then did well, and other children were vaccinated from the pustules. Mr. Brachet, of Lyons, mentions a case in which, on the 10th day there was no development; on the 11th revaccination was resorted to, and then the first vaccination commenced

and ran through its course. Thesecond pustules dried up immediately. I once vaccinated a child seven different times, each time with fresh matter. The seventh effort was successful, but there was no sign of the disease, until the fourteenth day.

I have thus endeavored to present, from a great multitude of facts on the various branches of small pox, vaccination, and revaccination, such a selection as most clearly and expressively elucidates each portion of the subject. It is only on the basis of a universal survey of a medical subject that a superstructure of sound philosophy can be built. It involves a great amount of labor, but no one should falter in the work on that account. The recent epidemic small pox, in this city, developed great many facts confirmatory of medical observations in other countries, and it is due to the profession that these facts shall be recorded. And this epidemic found so many medical men unprepared on some of the important points that have been established in other parts of the world, that the cause of vaccination, which is the cause of humanity, absolutely required a rigid analysis of its condition. I believe that it has come through the trial triumphantly, and that it is fully entitled to the confidence and gratitude of mankind.

Art. X.—*Treatment of the Eruption of Small Pox.*

It would scarcely be proper to close this paper without a reference to the *ectrotic* treatment of small pox. The following are the most recent recommendations of reputable practitioners:

Mr. Stewart says that while the eruption is vesicular or papular, if a small opening be made near the base of each vesicle, and the matter squeezed out, so that adhesive inflammation can be brought about, the disease is mitigated, and pitting prevented. Velpeau recommends the use

of lunar caustic. Mr. Grantham recommends that the point of each pustule be cut off, and the eruption dressed with calamine. Picton, of New Orleans, speaks highly of the benefits of the exclusion of light. Larrey had great confidence in a dressing of sweet oil. Legrand covered the face with gold leaf. Chomel speaks favorably of mercurial plaster, and Zimmerman, Rosen, Serres, Briquet, Nonat and Coppen all unite in its favor. They prefer what is called *Vigo's plaster*, of which the following is the recipe:

℞. Mercury 95 parts,
Balsam of storax 48 parts,
Wax, rosin, and turpentine aa 16 parts,
Gum ammoniac, betellicum, 5 "
Olibanum, and myrrh
Saffron, aa - - - 3 "
Spirit of Lavander, - - 2 "

The plaster must be spread on something stiff enough to support itself—and must be closely fitted to the skin. Three days is usually long enough for the plaster to remain in distinct, and four days in confluent small pox.

But so far as my experience has enabled me to form a judgment, I prefer covering the face with strong mercurial ointment, with 2 drachms of starch to each ounce. Better effects could not be derived from any application, than I have uniformly seen from this. I have constantly seen beneficial results from its use, night and morning, until the eruptive stage passes off.

M. Piorry strongly urges the use of blisters, and presents strong reasons in favor of the practice.

In both forms of small pox, but especially the confluent, attention cannot be directed too early to the state of the throat and tongue. Various forms of diseased action present themselves at those points, and, if not attended to early, may end fatally. Apthous ulcers, laryngeal, tracheal, and bronchial inflammations are among the

formidable affections that meet the physician in these cases. And I am persuaded that Edematous Laryngitis, so well described by Professor Bartlett in a former number of this *Journal*, is frequently a cause of death in confluent small pox. Dr. Fleming, of Dublin, in an able paper, on the diseases of the tongue, in the *Dublin Medical Journal*, has fully described the various affections of the tongue and throat, to which I am alluding. He found them prevailing extensively in an epidemic variola in Dublin. In the first class of these diseases, I have found a gargle of muriatic acid ℈i and honey ℥ij an effectual remedy; the Edematous Laryngitis can be relieved only by an operation.

BIBLIOGRAPHICAL NOTICES.

ART. V.—*Woman:* her dieases and remedies. A series of letters to his class, by CHARLES D. MEIGS, M. D., Professor of Midwifrey, and the diseases of women and children, in the Jefferson Medical College at Philadelphia, &c. &c. Second edition revised and enlarged. Philadelphia: Lea & Blanchard. 1851.

The merits of the first edition of this work were so generally appreciated, and with such a high degree of favor by the Medical Profession, throughout the Union, that we are not surprised in seeing a second edition of it. It is a standard work on the diseases of females, and in many respects is one of the very best of its kind in the English language.

Upon the appearance of the first edition, we gave the work a cordial reception, and spoke of it in the warmest terms of commendation. Time has not changed the favorable estimate we placed upon it, but has rather increased our convictions of its superlative merits. But we do not now deem it necessary to say more than to commend this work, on the diseases of women, and the remedies for them, to the attention of those practitioners who have not yet supplied themselves with it. The most select medical library would be imperfect without it.

ART. VI.—*Renal Affections:* their diagnosis and pathology. By CHAS. FRICK, M. D.

We have taken every opportunity in our power, to urge upon medical men the necessity of educating themselves

in the use of the microscope. A number of valuable Medical works are now before the profession, which are almost unintelligible, in some important particulars, to those ignorant of microscopic investigations. And the details of microscopic medical knowledge are continually increasing in interest, and will be greatly extended. Stanley, of St. Bartholomews, and Bransby Cooper have contributed a great deal of invaluable surgical information, by the aid of the microscope; Hassall has rendered valuable service to medical science, by his "microscopic anatomy of the human body, in health and disease," and all departments of medical research are fully awakened to the importance of the use of the microscope. But we have not space now to dwell upon the subject.

The work before us is one well worthy the attention of the profession. A medical man may, with this work, and Bowman's Chemistry, and a good microscope, all properly used, soon find himself rising in the scale of medical knowledge. He may soon reach a point of elevation that may give him full and excellent views of the rich landscape that spreads out before him, of whose existence he would scarcely have known anything except for the agency of this admirable instrument.

Dr. Frick's admirable work treats of the following subjects: "Precautions to be observed in obtaining a specimen of urine, with instructions for a superficial examination at the bedside." "Directions for a more exact examination of the different ingredients of the urinary secretion." "On the microscopic examination of the urine." "On the pathology of the different substances found in the urinary secretion." "On the pathology and therapeutical indications of the more important elements of the urinary secretions." "On the analysis of calculi."

Dr. Frick handles these various subjects very admirably, and has compressed a large amount of practical

knowledge within the compass of 179 pages. We cordially thank Dr. Frick for this contribution to the progress of Practical Medicine, and we regret that our very limited space in the Bibliographical department of this number of the *Journal* forbids a more extended notice.

ART. VII.—*The Races of Men:* A Fragment. By ROBERT KNOX, M. D. Lea & Blanchard. Philadelphia. 1850.

There has never been a time, when the subject of the races of men attracted such universal attention as it is commanding at present. All departments of Natural science are lending their aid to the elucidation of the subject, and its full explanation can be made alone through the medium of a number of the master interpreters in each of a large variety of the sections of Natural Science. If Philology alone were equal to the work, we might have hoped much from the labors of William Humboldt; if profound acquaintance with Paleontology and all the minute details of Geology could have accomplished the great desideratum, what might not have been hoped from the labors of Agassiz, and if a thorough mastery of Natural history could untie the Gordian Knot, we might turn to Dr. Bachman with confident hope. But alas, none of these minds have unveiled the deep mysteries of the great subject, and we hope, that we may be pardoned for saying that the author before us has scarcely any qualifications for the main question he has undertaken to discuss.

But we do not intend, at present, to enter into a disquisition on Ethnology, because a mere statement of the elementary principles of the subject would encroach so much upon the limited space allotted to practical medicine, that we cannot now say much on the matter of the work of Dr. Knox. But we shall take an early occasion

to do so, for we regard this question of Races, as one eminently adapted to the study of medical men, and we cannot refrain from expressing our thanks to our contemporary of the *Charleston Medical Journal* for the large and well filled space, given to some of the branches of Ethnology, during the past few months in the pages of that Journal.

Dr. Knox has entitled his work a fragment, and it is a true description. His knowledge of the subject matter seems to be very fragmentary, although he has managed portions of it with a great deal of skill. But we must stop for the present.

These works may be obtained at the book store of Beckwith & Morton.

ART. VIII.—*Silliman's Journal*—Published at New Haven, Connecticut, every two months in numbers of 152 pages, at $5 a year in advance.

Contents of number thirty-one, for January, 1871:

"Art. 1.—Comparison of Experiments on American and Foreign Building Stones to determine their relative strength and durability; by Prof. Walter R. Johnson.

"Art. 2.—On the Law of the Induction of an Electric Current upon itself when developed in a straight prismatic conductor, and of discharges of Machine Electricity through straight wires; by J. H. Lane.

"Art. 3.—On Meteorites; by Charles Upham Shepard.

"Art. 4.—An Essay on the Classification of Nemertes and Planariæ: preceded by some general considerations on the primary Divisions of the Animal Kingdom; by Charles Girard.

"Art. 5.—Memoir on Emery; by J. Lawrence Smith, M.D. Second Part—On the Minerals associated with Emery.

"Art. 6.—On the Velocity of the Galvanic Current in Telegraph Wires; by B. Gould, Jr., in a Report to Prof.

A. D. Bache, LL. D., Superintendent of the U. S. Coast Survey.

"Art. 7.—Reply to Mr. De la Rue's remarks on the Navicula Spencerii contained in the American Journal of Science, vol. ix, p. 23; with a notice of two new test-objects; by J. W. Bailey.

"Art. 8.—Miscellaneous Notices; by J. W. Bailey.

"Art 9.—On the time required to raise the Galvanic Current to its maximum in Coiled Conductors, and its importance in Electro-Mechanics; by Prof. Charles G. Page, M.D.

"Art. 10.—A new figure in Mica and other Phenomena of Polarized Light; by Professor Charles G. Page, M.D.

"Art. 11.—Description of new species of Fungi collected by the U. States Exploring Expedition under C. Wilkes, U. S. N., Commander; by Rev. M. J. Berkeley and Rev. M. A. Curtis.

"Art. 12.—On the markings of the Carapax of Crabs; by James D. Dana.

"Art. 13.—Chemical examination of a Phosphate of Iron, Manganese, and Lithia, from Norwich, Mass.; by W. J. Craw.

"Art. 14.—On the Physical and Crystallographic characters of the Phosphate of Iron, Manganese, and Lithia, of Norwich, Mass.; by James D. Dana.

"Art. 15.—Notice of the discovery by Walter Mantell, Esq., of Wellington, in the Middle Island of New Zealand, of a living specimen of Notornis, a bird of the Rail Family."

Besides, 50 pages are devoted to new discoveries in Chemistry, Physiology, Mineralogy, Astronomy, General Science, and Bibliographical Notices.

We cannot too warmly commend this work to our readers. It is an honor to science; a work of which every American may well be proud.

SUMMARY OF RECENT MEDICAL INTELLIGENCE.

Dengue Fever.—The Charleston Medical Journal, for November, 1850, contains an able memoir on the Epidemic Dengue of Charleston, in the summer of 1850, from the pen of Professor Samuel Henry Dickson. This epidemic differed in some respects from former inflictions of the disease. In 1835, Professor Dickson wrote an admirable monograph on Dengue, and as there are few readers whose medical literature extends that far back, who are not familiar with the general character of the disease, known as Dengue, a character indelibly stamped by Prof. Dickson, we shall confine our synopsis, mainly to the distinctive characteristics of the Charleston epidemic, of 1850, the summer of which year, Dr. Dickson says, "will be remarkable in the medical history of Charleston, for the prevalence of epidemic fever of a singular character. The season had been unprecedentedly hot and dry. The thermometer ranged between 80 and 90° for forty days successively, approaching or even exceeding the highest of these points, and never falling, *within that time*, lower than the lowest." There had been no rain for a long time; "the earth was parched; the sky dazzingly clear; the nights as well as the days oppressive." There had been a good deal of hooping cough and scarlatina, the latter being severe.

In the latter part of July cases occurred which were considered scarlatina, a mistake not quite equal to some blunders in diagnosis, made a few miles from this city, a few weeks ago, consisting of pronouncing several of the

first cases of varioloid, in that locality, attacks of dengue! In the Charleston dengue, "the fever assailed with great violence, ran a brief course, inflicting intense suffering, and disappeared, in many instances, without any cutaneous eruptions." Prickly heat was prevailing at the time, and it is supposed that the dengue eruption may have been overlooked, but Dr. Dickson says, "in the early stage of the epidemic, it was certainly wanting in a large proportion of instances." As the epidemic advanced, "exanthematous contingencies" were more and more certain to exhibit themselves, in the white race. In numerous examples, the blacks were exempt from the eruption.

In a majority of cases, the attacks were sudden and violent. There was a tendency, frequently, to remission and intermission, and the hour of the access of the febrile paroxysm, in a majority of those cases closely observed by Dr. Dickson, was ten in the morning. The course of the disease generally occupied eight days. When the eruption subsided, all ailment usually disappeared slowly and gradually. There was great muscular weakness. In the early part of the epidemic, the eruption was often absent, in the latter part of the summer, it was almost universally present. In the blacks, the eruption was generally absent, in three cases out of five.

The epidemic was very universal. Numerous large households were all attacked. Of Dr. Dickson's family of eleven, he alone escaped. In his kitchen, fourteen out of seventeen were attacked.

Among the visitors to the city, the time of the latent period was various, but sometimes, as Dr. Dickson says, "prodigiously brief." Attacks followed exposure to the air of the city in a very short space of time, usually.

The prognosis was altogether favorable. Violent as the symptoms were in the onset, they subsided after a

time, and certain restoration to health followed. Fatal terminations were very rare.

The eruption was various in its character. Ten varieties are named by Prof. Dickson: the scarlatinous, the rubeolus, the erysipelatous, the variolous, or varicellous, the lichenoid, the papulous, the phlegmonoids, the milliary-urticarious, the purpurous, and, in one instance, the lepra vulgaris. It is evident that Dengue is a free trader in "eruptive contingencies."

In Dr. Dickson's former monograph, already noted, he believed that the break bone fever, described by Dr. Rush, as prevalent in Philadelphia in 1780, was a different disease from the Charleston epidemic of 1828. He now believes them identical diseases, except in some modifications.

Dr. Dickson discusses the exanthenatous character of dengue, very ably, and cautiously concludes, that "it may occupy a middle position between maculated typhus, and the exanthemata proper, such as small pox, measles, and scarlutina."

Of the cause of dengue, Dr. Dickson says but little, and we regret that that little is not to the point. Strangely enough, he looks upon dengue as contagious. In the gloom and obscurity of the causes of disease, occasional occurrences loom up that are mistranslated into contagion, and they are thus mistranslated generally on the same principle that Hahneman ascribed seven-eighths of chronic diseases to the *psoric virus*—he had to say something, and it was as easy to say that as anything else. Contagion, as a cause of disease, is like "sympathy" once was, as an explanation of pathological phenomena—an easy stool to lounge upon. We have not a doubt that during the prevalence of the prickly heat, at Cnarleston, of which Dr. Dickson speaks, as many facts, to prove it contagious, were developed, as there were in dengue. The analogies, on whose bewildering, and uncertain seas, Dr.

Dickson launches his bark, do not bear him up. Dengue is evidently a disease of hot climates, and unquestionably of hot weather. Can Dr. Dickson inform us of any contagious exanthematous disease that respects the geography of the zones? Even the vegetable analogies to which he appeals—the nut-grass, the cockle-bur and the dandelion desert the Professor on this point. If they move in the current of migratory bodies of men, they can also grow wherever the sun and earth can call vegetable life into growth. Does, or can dengue follow this law? If so, where are the instances?

Dr. Dickson remarked an unusual prevalence of boils, and carbuncles during the late epidemic. We shall have more to say on this subject in a paper on Variola, in a future number of this Journal.

From Dr. Dickson's account of the treatment of dengue, it is evident that the disease would have afforded abundant glorification for the Homœopathists. But little treatment of any kind was needed. B.

Surgical Treatment of Epilepsy.—In the *Western Lancet*, for November, Dr. Holston, of New Concord, Ohio, presents a number of interesting cases of Epilepsy, treated surgically, and we think at least two of the cases entitled to a very general reading on the part of medical practitioners. The treatment of certain forms of epilepsy, by operations upon the head has long been familiar, and a physician who may be called upon to treat epilepsy would be culpable if he left the possible pressure upon the brain, out of his investigations of the cause of the particular attack. But Dr. Holston's path does not lie altogether in this beaten range, as the reader will see in the following details:

A young lady, aged 15, came under Dr. Holston's care. Her general health was good. Several years anterior to

the call on Dr. H. "she had run a piece of glass into the inner side of the plantar aspect of the left foot, and since then has been afflicted with paroxysms of epilepsy, recurring daily, and preceded by an aura, arising from the scar of the injury." The patient complained of stinging pains in the region of the cicatrix, and Dr. H. thinking some spiculæ of glass might have remained, made an incision in search of them. The wound thus made, suppurated two or three weeks, and during that time, the epilepsy was absent. As soon as the wound healed, the fits returned, which ceased upon a renewal of the wound. The complaints of the patient induced the mother to heal up the wound, aud in two months the fits returned with all their former violence. The girl is yet alive, a hopeless idiot.

Case II. A girl aged 14, who had never menstruated, was the subject of occasional attacks of epilepsy, for two or three years, and they had lately increased in number and violence. There was an extensive necrosis of the femur, which discharged from several orifices on the inner, posterior, and outer aspect of the limb. The necrosed fragments were removed, by an operation, the case remarkably well treated, and in four weeks the wound healed; menstruation returned, the necrosis and epilepsy left together, and the patient remains well now, after a lapse of twelve years.

The next four cases belong to that familiar surgery of the head, of which we spake in the preliminary remarks. Dr. H. deserves credit for the excellent manner in which he managed these four cases, but they have not the novelty and interest that attach to the two cases, of which we have made a synopsis.

In the 7th and last case, Dr. Holston undertook the cure of a case of epilepsy, by dividing the median and ulnar nerves. This was a failure, of course, and Dr. Holston promises not to repeat such surgery.

We must beg leave to hint to our confrêre of the Western Lancet, that his proof reader was sadly at fault in reading Dr. Holston's communication. B.

On the Action of Mercurial Ointment and the Vapor of Mercury.—The *American Journal of Pharmacy*, for January, 1851, contains a paper from F. Von Bærensprung, M.D., in which is recorded a series of interesting experiments on the action of triturated mercurial preparations, and mercurial vapor. The experiments were very skilfully conducted, and the results are useful to practitioners of medicine.

RESULTS. 1st.—*It is first established that the metallic mercury in mercurial ointment does not pass into the body as such.*

2d.—*It is proved that mercurial ointment contains protoxide of mercury in addition to metallic mercury and fatty matter.*

3d.—*The greater part of the mercury in the blue ointment is perfectly inactive. One grain of the oxide of mercury to ʒj of fatty matter is equal, in strength and action, to the blue mercurial ointment. Hence its great superiority.*

These results apply also to the other preparations made by the trituration of metallic mercury.

Results of experiments with mercurial vapor: 1st.—It is proved that mercury does not penetrate animal membranes even in the gaseous state; hence it cannot be taken up in the living body.

Vapors of mercury first produce inflammation of the lungs, subsequent oxidation and absorption take place, and mercurialism commences.

The Odor of Musk destroyed by Camphor.—The combination of camphor with musk, according to M. Fleischman, destroys the odor of the latter.

On Cod-Liver Oil in Phthisis. M. Duclos thus sums up the results of his experience with this substance:

1. The presence of fever is what we must chiefly attend to, relying more on this remedy when it is absent, and less when it is present.
2. The remedy frequently arrests the progress of the disease when only in the first stage.
3. It rarely arrests it when in the second stage, although it may retard it.
4. The third stage is not favorably influenced by the oil.
5. The oil should be administered for a considerable time; and, if a good effect results, it should be suspended awhile, to be again resumed. Thus, it may be given for two months, and then suspended for a fortnight, resumed for a month, and re-suspended for a fortnight again, so as gradually to reduce the length of the intervals during which it is given.
6. The clear, slightly smelling, nearly tasteless oil, is less efficacious than the brown, thick, strong oil.—*Brit. and For. Med.-Chir. Rev.*, October, 1850, from *Bull. de Thér.—Med. Jour. Phar.*

On Linseed Oil in Hemorrhoids.—Van Rye believes, that, in general, surgical treatment is too hastily resorted to in this affection, and he wishes to bring under the notice of the profession a remedy he has found of great efficacy during twenty-five years. It consists in the administration of two ounces of fresh linseed oil every morning and evening; and so rapid is the amendment generally, that the remedy is seldom continued longer than a week. Sometimes the stools are somewhat increased in quantity, but neither vomiting nor any other

ill effect produced. The only precaution the while, is the abstinence from alcoholic drinks and too stimulating a diet.—*Ibid*, from *L'Union Médicale.—Ibid.*

On Syrupus Iodidi Ferri.—Mr. Tizier, Apothecary, of Dublin, makes the following useful suggestions, on the preparation of this valuable article:

The new Dublin pharmacopœia directs "to introduce the Iodine, iron and water, into a glass flask, and apply a *moderate heat* until the solution loses its red color." Now, as the great success of the first part of the process depends on the rapidity with which it is conducted, without any unnecessary exposure to the air (but what cannot be avoided) until a neutral solution be affected, there is evidently considerable time lost, and danger of decomposition incurred by pursuing these directions. This circumstance appears more remarkable, when we are aware that all extraneous application of heat is superfluous. Iodine and iron exert so powerful an affinity for each other in the presence of water, as to combine with the greatest facility, generating a large amount of sensible heat; at the same time it is only necessary then to bring their particles *constantly in immediate contact with each other*, to fulfil this end to our entire satisfaction, and for this purpose, two practical points must be attended to, first, to *rotate* the flask containing the mixed substances briskly and diligently for some moments in the hand, until the deep red color of the solution disappears, and is succeeded by its olive-green pellucid and normal one, which, when tested, should be perfectly permanent to the action of amidine. And, secondly, to break down the iron turnings as small as possible, carefully freed from any adhering oxide, by which means a greater superficial extent is exposed to chemical action, and thus ensure rapidity of combination more easily.

By careful attention to these apparently insignificant points, the preparation, in its first stage, will be divested of much of its pracical difficulty, and rendered easier of execution, while risk from decomposition will be entirely obviated. Care should be taken to filter the solution

(after testing it) into the saccharine mass, which preserves the neutral iodide of iron so far as to preclude the possibility of change from any subsequent heat that may be employed.—*Pharmaceutical Journal, November* 1 1850.

On Acetate of Potash in some Diseases of the Skin.—The Philadelphia Medical Examiner publishes the following abstract from the Edinburgh Monthly Journal:

Dr. Easton, of Glasgow, having been led, by the publication of Dr. Golding Bird's Lectures, to employ Acetate of Potash, in some diseases of the skin, has published the results at which he has arrived, in an important practical paper, in the Edinburgh Monthly Journal, for May, 1850. Several cases are given, of Psoriasis Diffusa, Eczema Impetiginodes, Eczema Rubrum, Psoriasis Palmaris, Lepra Vulgaris, &c., which were rapidly cured under the use of the Acetate of Potash, with no other assistance than occasionally the alkaline warm bath, and fomentation of the affected extremities, with blood-letting, in one febrile case, and a catharto-diuretic mixture in another. Half a drachm of the medicine, thrice daily, is the dose for an adult.

Dr. Easton considers the medicine to act: 1. As a diuretic, as its use was always followed by a great increase in the amount of urine.

2. Not only is the amount of the *water* of the urine increased, but also its solid constituents in so remarkable a degree, as to entitle it to be considered as a renal-alterative or blood-depurant, as well as a renal-hydragogue.

3. Like all the salts of the vegetable acids, it is converted in its progress through the system, into a carbonate, and to this conversion substantially its benefit is owing. But the administration of the carbonate itself does not produce the effects which follow the use of the acetate. Hence Dr. Easton infers that the physiological action and therapeutic efficacy of the acetate are connected in some manner—unknown at present—with the metamorphosis which takes place in itself.

Water Mellon Seed as a Dieuretic.—In the November of the Charleston Medical Journal, Dr. Hook, of St. Matthews, S. C., bears strong testimony to the value of the seed of the water-mellon as a dieuretic, and gives a very interesting case illustrative of its powers. The editors of the Charleston Journal join their testimony with that of Dr. Hook, and we are able to corroborate their favorable opinion. Dr. Hook recommends that two ounces of the seed be bruised and a pint of boiling water poured over them. After cooling, one gill of this is taken at a dose, and in this way, is not only a demulcent, but an excellent dieuretic.

But we can assure Dr. Hook that we have seen much finer dieuretic effects from the formula we subjoin, than from any other dieuretic we have ever used. It has often succeeded when all others failed. In 1838 we reported in the predecessor of this Journal, a very remarkable case of suffering in the kidneys and bladder, in which the calls to urinate were almost incessant for two days and nights, and only one or two drops of urine could be passed at a time. The pain complained of resembled that described as an attendant upon stone in the bladder. Hip bathing, purgatives, emetics, opiates, and the usual round of dieuretics failed to give any relief. The patient seemed to be sinking rapidly under the combined efforts of pain, agitation, vigilance, and exhaustion. The anti-lithic paste was then resorted to for the first time, by the writer, and in less than half an hour after it was given the patient was easy, and slept for several hours. The kidneys acted freely, and all suffering ceased. Since that time abundant opportunities have presented themselves for the use of this paste, and its effects are uniformly all that the physician and patient can desire.

The formula for this paste was taught by Professor

John E. Cooke, and he gave strong testimony to its value. The following is the recipe:

℞.	Castile soap,	℥iv.
	Spermacetti,	℥viij.
	Ven. Turpentine,	ʒvi.
	Ol. Anniseed,	ʒiij.
	Turmeric,	ʒij.
	Honey, q. s.	

Rub the soap and spermacetti well together, then add the turmeric; after rubbing them well, add turpentine and ol. anniseed; and sweeten with honey.

Of this paste, a piece the size of a nutmeg is given two or three times a day. The diseases in which it is most useful are those in which the mucous membrane is involved. There is a species of hoarseness which follows inflammatory action, and which often approaches aphonia, in which this paste is a very valuable remedy. B.

Professor Eve's Card.—We published in the December number of this *Journal*, Professor Eve's Card, on the subject of the Report on Surgery, to be made by him, to the American Medical Association, next May. By a typographical blunder, he was made to call himself Chairman of the American Medical Association, instead of Chairman of the Committee of Surgery of that body. It is such an obvious error, that our confrères of the press, will find no difficulty, we hope, in correcting it. B.

THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY.

EDITORS.

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AND

THEODORE S. BELL, M.D.

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THE

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OF

MEDICINE AND SURGERY.

FEBRUARY, 1851.

ART. I.—*General Remarks on Alterative Medicines.* By W. S. CHIPLEY, M. D., of Lexington, Ky.

Every candid practical observer, to whom the complex properties of medicinal substances are familiar, must be prepared to admit the futility of all attempts at a perfect and satisfactory classification of the Materia Medica. There is scarcely a medicinal agent which may not justly claim rank in more than one class, and there are not a few productive of such contradictory results as to render it extremely doubtful which is the most prominent characteristic. As has been remarked, medicines are often two-edged, cutting both ways. It becomes, then, the duty of the intelligent practitioner to seek to utilitize the useful property, and to neutralize that which existing circumstances may render hurtful.

Notwithstanding this diversity of action, so characteristic of most medicinal agents, I believe that classification within certain limits may be extremely useful, espe-

cially in facilitating an acquisition of a knowledge of the Materia Medica, and in placing that knowledge more immediately at command in case of need.

Some of the articles comprised in the class, known as Alteratives, on which I design at present to make some general remarks, are peculiarly diversified in their effects; yet I think there will be no difficulty in making myself intelligible when I shall have clearly defined the property that affiliates these articles in one class under the denomination of Alteratives.

There are some medicines which seem to affect principally or uniquely the nervous system—evanescent in their effects, a few hours or days at most suffice to efface all trace of their action—no permanent modification remains to attest the power of the agent and the system resumes its wonted condition as if no disturbance had occurred. These agents may be powerful in the limited sphere in which they act, but there is no response in the general economy nor any permanency in the effects produced. There is a striking contrast between this class of remedial agents and that which I propose to consider. Less conspicuous primarily, alteratives are more durable in their effects. They happily fulfil indications that medicines of a fugacious character could not reach. They affect the organic elements of both the fluids and solids in a manner calculated to endure long after the primary impression of the medicine has passed away. This class of remedies formerly attracted much more attention, when acrimony was the most common reputed cause of disease, and alteratives then embraced many more articles than are now generally conceded to belong to the class. Periera still views this class as including "nearly the whole of the articles comprising our Materia Medica." I desire, however, to be understood as useing the term in a much more restricted sense, yet in a sense which will embrace a great variety of important articles. Definition,

at all times difficult, is peculiarly so in this instance, as it is almost impossible to convey, in few words, the meaning of the term alterative without a feeling of being too contracted or too comprehensive. I will, however, venture to define the term as embracing those medicines that insensibly produce a profound impression on the organic elements, by which a salutary change is effected either in the solids, or fluids or both, calculated to neutralize certain morbid actions of the system, and thereby to restore health.

It was formerly supposed that these medicines acted chiefly by exciting and supporting the evacuation from the skin; but this opinion is now generally abandoned and will not therefore be considered.

At this day four opinions seem to divide intelligent members of the profession:

1. That alteratives have the property of altering, in some inexplicable manner, the nature or quality of vital action.

2. That their salutary influence is the result of a change effected in the composition of the organic tissues.

3. They are believed to expend their whole force on the fluids, altering their composition, consistency, etc., sometimes rendering them less adapted to interstitial nutrition, and less capable of furnishing the elements of acute or chronic inflammation.

4. That alteratives make a primary impression directly on the nervous system, affecting the general economy, and controlling morbid action only secondarily.

Each of these propositions expresses a truth, but neiof them is exclusively correct. There is, in fact, no uniformity in the mode of action of different alteratives—the solidist who would limit the action of this class of medicines to the organic tissues, is not less grossly in error than the humoralist who would maintain that all alteratives exert an exclusive influence over the fluids. The truth

of each of the above propositions will hereafter be illustrated by reference to the mode of action of particular articles belonging to this class.

Alteratives are indicated chiefly in the management of chronic disorders, but are sometimes useful in acute maladies of a grave character. In mild disorders, only slightly modifying the general economy, limited in extent, and affecting organs not absolutely essential to life, it will be readily perceived that our means may safely correspond with the unimportant character of the disease, and simple remedies suffice to effect a cure. But if graver morbid action invades one or more important organs, or speedy dissolution is threatened in consequence of the extent of diseased action affecting profoundly the whole economy, more energetic and powerful means are demanded, and duty enjoins a resort to those remedial agents that are known to exert not only an active, but durable influence.

Blood-letting has, by some authors, been placed at the head of alteratives, but this agent is with much more propriety classed with antiphlogistics. True, it does exert a powerful alterative influence, and the same may be said of almost every article of the Materia Medica; but it is not an alterative in the sense in which I desire to use that term. It is too prompt in its action—suddenly despoiling the system of a portion of the vital fluid, altering the composition of what remains, and thereby depriving the solid tissues of the elements of life on which their reparation depends. But when we repeat that alteratives, properly speaking are applicable, almost exclusively, to the treatment of chronic diseases, it will be at once perceived that blood-letting is wholly foreign to this important class of remedies, save as an adjuvant. For it should be remembered, that blood-letting, and many other remedial agents, may be resorted to as useful adjuvants in the course of an alterative treatment.

When alteratives are demanded in the management of acute disorders, particular regard must be had to the mode of action of the different articles which compose the class. In such cases the desideratum is usually either a modification of the crasis of the blood or a prompt alteration of morbid action. Certain alteratives, as iodine, arsenic, etc., always produce a certain degree of irritation, ever so much more intense as we seek a prompt and decided effect; there are others, however, that nettly fulfil the indication and will rarely disappoint the judicious practitioner. Saline remedies are alteratives in virtue of their property of attenuating the blood, while mercurials exert as decided an influence by changing the action of the extreme vessels. In puerperal peritonitis so decided is the influence of mercurials that many physicians regard them as the sheet-anchor of hope and safety. That the beneficial results in this case are fairly attributable to the alterative properties of the medicine I have no doubt, and I am confirmed in this opinion by the fact that the benefit is always more decided when the cathartic influence of the remedy is restrained by combination with opium. This is an instance in which the alterative acts by effecting a change in the nature and quality of vital action.

Gendrin has demonstrated the safety and utility of large doses of nitrate of potash in febrile articular rheumatism. In this case there is an alterative action as effectual as, but widely different from, that produced by mercury. The primary effect is a modification of the circulating fluids—an attenuation of the blood which enables the engorged and oppressed vessels to relieve themselves and recover their normal action.

But alteratives are comparatively little used in acute affections. They rise in importance in proportion as morbid action has been protracted and disease has struck deep its roots in the constitution, spreading from organ to

organ, and giving rise to a series of consecutive accidents that points clearly to a lingering and painful existence, or to a speedy dissolution. Those medicines that produce only a temporary modification of the organism, however powerful in their primary operation, become useless, or only serve to flatter and deceive.

Most mineral waters probably owe their efficacy to the alteration they effect in the circulating fluids. Mr. E. A. Jennings says:

"Though great allowance must be made for the effects of change of air, relaxation from business, change of habits, and other accidental circumstances, yet all candid observers must acknowledge that, when due allowance has been made for all these circumstances, a large residue of cases remain where the most surprising good effects have been produced by a course of mineral waters. From the effects generally produced by them on the kidneys, it is evident that a large portion of the water is absorbed; and it is probable that their good effect is to be attributed as much to the alteration they produce in the chemical character of the blood, by entering into its composition, as to the increase they occasion of the secretions of the bowels."

Our remedies may be directed against causes or effects. Chronic maladies are often encountered when it is wholly impossible to trace the existing lesions to their source—the cause has disappeared, the effects only remain. Of course in this case no regard can be had to that of which we know nothing, and such agents must be selected as are best calculated to obviate the effects and restore healthy action. When the cause is appreciable and still exists, exerting its baneful influence, the first indication is to neutralize or remove it. The recuperative force of the living economy is often sufficiently active to restore health after the removal or neutralization of the cause, hence a thorough and minute analysis

of the entire history of the case, with a view to discover the source of evil, cannot be insisted upon too strenuously. It must not be supposed that every chronic disease calls for the administration of alterative medicines; the cause of such maladies is often detected in vicious habits, an abandonment of which is a condition, without which a cure cannot possibly be effected, and a compliance with this condition will not unfrequently supersede the necessity for medicines. In such cases the exhibition of alteratives is useless and often positively injurious.

The importance of a careful scrutiny of each individual case will appear more clearly, when it is recollected that an alterative productive of the happiest effects, when directed to neutralize a cause, may prove highly injurious if given to obviate consecutive accidents. No remedy can be more certain or active in primary syphilis than mercury, yet it is scarcely possible to conceive of more lamentable results than flow from the use of the same remedy in the secondary forms of that loathsome scourge of vice. The preparations of Iodine exert little if any influence on scrofula in the primary stages of that terrible disease, but who has not been gratified with the wonderful operation of the same remedies when given to alleviate those grave organic alterations, effects of the scrofulous vice, that so often disfigure beauty, and render life a burden.

It has been said that in the mode of action of alteratives on constitutional vices, and on virus, there is something quite specific; there is nothing evident intermediate between the cause and effect; the effect of the medicine on the economy in health will not enable us to anticipate its anti-syphilitic or anti-scrofulous curative action. At the same time it is believed that when they are considered independent of their specific action, in rela-

tion to ordinary chronic disorders, their mechanism may, to a certain extent, be comprehended.

Now, I am of opinion that the mechanism of the so called specific action of mercury in the cure of syphilis, may be as rationally explained as the mechanism of this and other remedies in the cure of common chronic diseases.

It is said that alkalies are serviceable in engorgements of the liver, and their action is thus explained:—The function of this organ consists in the elaboration of the immense amount of blood that it is constantly receiving; when diseased, soda is administered by which the blood is rendered evidently alkaline, less coagulable, and thinner; thus facilitating the circulation in the hepatic vessels, and thereby placing the organ in the best possible condition to resume its normal offices.

This explanation may be correct, but it is not a whit more reasonable than that which explains the mechanism of mercury in the cure of syphilis, by attributing its salutary influence to the change it effects in the morbid action that generates the virus of this disease. This change consists in the substitution of a harmless action tending to health, for one which, unchanged, surely terminates in disorganization and death.

But some able writers have stoutly maintained the doctrine that many chronic diseases, as well as some acute disorders, are caused by accidental productions, similar to fungi, mosses, and mushrooms. Morbid seed germinate in the economy at the expense of the fluid, and the fruit is matured in the substance of the tissues or on the surface, constituting those local lesions which are troublesome to the sufferer, either mechanically or in consequence of the inflammation they produce, the reabsorption of the products into which they are resolved, or of which they provoke the secretion. This pathology is said to be easily demonstrated as applicable to

most of the diseases of vegetables, and Trousseau declares that the day may come when these views will not appear altogether absurd in regard to man and animals.

Taking this as a starting point, he says, it is easy enough to explain how alteratives act in curing most chronic maladies, such as tetter, cancer, scrofula of which the cause is destroyed in the same manner as certain poisons destroy fungi, mosses, or mushrooms, which are developed on organic elements in decomposition or even on those not yet in decay.

The truth or falsity of this theory cannot be determined in the present state of medical science, but it undoubtedly throws open an extensive field for cultivation, where philosophical observers may hereafter win enduring fame for themselves and confer lasting benefit on their race.

I have already admitted that no rigorous classification of the Materia Medica can be made; antim. tart., for instance, is very properly classed with emetics, but it may act as a sudorific, expectorant, or cathartic. The same diversity of action characterizes alteratives; calomel is one af the most powerful of the class, but it may also act as a cathartic or sialogogue. This fact suggests some useful cautions. It is known to every practitioner of experience, that when an alterative acts with violence on the primæ viæ, or produces any considerable evacuation, its energies are uselessly expended, and the object of its exhibition defeated. Hence the importance of observing effects closely, so as to be prepared to limit the medicine to its alterative influence, by such judicious combinations or modification of doses or preparation, as each individual case may demand.

Again, it is not a matter of indifference what article shall be selected for a particular case, for the action of these medicines is far from being identical. Some of

them make a profound impression on the constitution, enfeeble the general system, and may not be wholly neutralized for months; while others, acting apparently with equal power, are more readily assimilated or eliminated, a few days sufficing for the disappearance of any depressing influence they may exert. Hence the propriety, especially in acute disorders, of selecting the former in the treatment of vigorous persons in whom reaction is intense and inflammatory action continuous; while the latter should be reserved for those patients whose constitution gives reason to apprehend collapse after the abatement of the disease.

Peculiarity of constitution may interdict the use of alteratives, that are used with the greatest advantage in the treatment of the same disease as it occurs with a vast majority of persons. Iodine and its preparations are applicable to the treatment of a great variety of chronic maladies, yet I have met with patients who could take only certain preparations of this medicine, and others who could not, without positive and serious injury, take it in any form, although general experience had pointed it out as the most efficient remedy for the disease with which the sufferers were afflicted.

As a general rule alteratives are administered only in small doses, and require to be continued a considerable length of time, in order to affect favorably the organism and to restore healty action to the solids or normal properties to the fluids. Small doses are in most cases absolutely necessary to secure the alterative effect of the medicine, with which some other of its medicinal properties may be wholly inconsistent. Mercury in small doses is a powerful alterative—in large ones cathartic, and if the latter effect is obtained, the former is lost. Homœopathic remedies, when they possess any activity whatever, must owe all their efficiency to their alterative properties. But that absurd system owes far more to the recuperative

power of nature, under a rigid regulation of diet, clothing, exercise, etc., than to any active property of the infinitesimal doses with which its supporters may be pleased to amuse the imagination of their victims.

The same assiduous attention, to what our fathers termed the non-naturals, is imperatively demanded in every case that calls for the exhibition of an alterative. A strict attention to diet, rest, exercise, excretions and affections of the mind constitutes an essential feature in every rational plan of alterative treatment, without which, in grave cases, no reasonable hope of cure can be entertained. I have never known a practitioner, celebrated for unusual success in the management of chronic disorders, who was not remarkable for the extreme rigor with which he enforced a proper regimen.

I do not pretend to claim any novelty for the views expressed in this paper, and would be very far from insisting on the theoretical opinions expressed. It is consoling to reflect that whether these theoretical opinions be true or false, the correctness of the practical deductions is unaffected; for these deductions are made from experience, and do not follow, but precede theory. Whether the mode of action of mercury consists in altering or suspending morbid action, or that of alkalies in attenuating the blood, or that of prussic acid in a direct impression on the nervous system, experience has demonstrated that these medicines are peculiarly appropriate to certain disorders, and that they cannot be successfully or safely employed indiscriminately. Each individual case of disease must be thoroughly studied in all its phases; the constitution, hereditary taint, habits, condition, profession, idiosyncracy, etc., of the patient must be studiously canvassed before the intelligent practitioner will be prepared to select his remedy. Having thus made the selection, another series of observation is imperatively demanded. Every effect must be carefully noted, and the remedy be

continued, modified or abandoned, as each case may require.

Without this system of laborious and untiring observation and reflection, little may be hoped for in the management of grave chronic affections. Accident, may indeed, sometimes supply these high and ennobling qualities of the scientific physician; but there can be neither the same safety or security for the patient, or satisfaction to the practitioner.

ART. II.—*Inverted Toe Nail.* A new Remedy. By BENJ. P. DRAKE, M. D., of Lexington, Ky.

There are but few diseases which inflict on the patient a greater amount of suffering, and on the medical attendant a greater amount of mortification, than the one that stands at the head of this article. The exquisitely sensible granulations in which the nail is embedded, frequently produce such intense pain as entirely to prevent the patient from wearing a shoe and from walking. Besides this, the obstinacy of the malady frequently compels the practitioner to resort, one after another, to all the various remedies which have been suggested for its removal, almost every one of which is painful, some of them excruciatingly so, and at last, mortified and foiled, he gives up the case without having accomplished a cure.

The treatment pursued in the following case is worthy the attention of the faculty and a fair trial of its efficacy, from the consideration that it is without pain in its application and that in this instance at least it has been successful:

CASE. Miss A. E. T., æt. about 16, of irritable constitution, has been for the last three years the subject of inverted toe nail in the great toes of both feet. Almost

every remedy that has been suggested for its relief had been resorted to, but without success. The nail had been scraped very thin, caustic had been extensively and frequently applied, the roller had been worn for months, and lastly, the diseased sides of the nails had been split down to the glands, and then with the forceps, torn out by the roots. The relief following these severe measures was but partial and temporary, and in the course of a few weeks or months the disease was as distressing and painful as ever.

In this state of the case it occurred to me to make trial of the common tannic acid, which I applied in the following manner: I placed a portion of the tannin in its dry state on the nail, and then raising the exuberant granulations, with the tortoise shell handle of a lancet, I gently but carefully pressed it down to the embedded edge of the nail and filled the cavity with it, after which I covered the whole of the proud flesh with the same application, and enveloped the toe with a roller bandage. As no pain followed, the dressing was permitted to remain until the fourth day. On its removal, the improvement was so manifest that I had no hesitation in using the remedy again, which I did precisely as at first. To be brief, six or eight applications of the tannin, at intervals of three or four days, were made, and the cure appears to be complete and perfect.

Art. III.—*A Case of Tetanus.* Reported by W. H. Cobb, M. D., of Louisville, Ky.

The subjoined case occurred in the surgical ward of the Louisville Marine Hospital, while under the charge of Prof. Paul F. Eve, of the University, to whose courtesy I am indebted for the frequent opportunities I enjoyed, of watching the progress of the case:

The patient, John Haynes, is an Irishman by birth, 30 years of age, of a strong, robust frame and healthy constitution. About the first of December, while engaged in blasting rock on the railroad between New Albany and Salem, Ia., the powder exploded as he was in the act of bending over the charge. Both eyes were irretrievably destroyed; his face horribly mangled and bruised, and fragments of the rock deeply imbedded in its structure. In addition, a severe lacerated wound was inflicted upon the palmar surface of the little and ring fingers, and the ulnar border of the palm of the left hand; the tendons, nerves and blood-vessels supplying these structures were laid bare, and in some places the bone was completely denuded. A comrade, Higgins by name, assisting him in his operations, also sustained a loss of both eyes, fracture of the inferior maxilla and other injuries of an apparently more serious character than the patient whose case I am about to lay before you. They entered the Hospital Dec. 10th.

The treatment adopted, both prior and subsequent to their entrance, was mildly antiphlogistic; removal of foreign substances, exhibition of mild laxatives whenever the state of the bowels seemed to indicate them, the use of poultices and warm water dressings to the wound, restriction as to diet, &c. Within the last few days, the wound on the hand of Haynes has been dressed with a solution of chloride of soda—one part of "Labarraque's Disinfecting Solution" to 13 of water.

Dec. 18th. Patient doing well, appetite much improved, rests well at night. Complains of a slight increase of the pain in the eyes. Bowels costive. Ordered:

℞. Ol. Ricini ℥j.

19th. M. Dr. Eve's attention was, for the first time, directed by the patient to the existence of convulsive twitchings, involving the muscles of the entire left forearm. Upon questioning the nurse of the ward, he stated

that yesterday, while dressing the wound of the hand, he perceived a small fragment of bone protruding from its surface; simultaneously with its removal, the patient experienced spasm of the fore arm of the affected side. The spasms recurred at long intervals during the day, whenever any of the exciting causes were in action; at other times the muscles were perfectly quiet. The patient also complained of soreness and pain about the muscles of the jaw, but upon instituting an examination, the irritation was found to be owing to a carious tooth.

Actual condition at time of visit:

The patient is suffering from tetanic spasms, recurring at intervals of about 1 minute, as yet mild in their character, and affecting only the left forearm. No pain or uneasiness about the jaws, muscles of the neck, or diaphragm; opens his mouth with ease, and converses without difficulty; mind clear, pulse, skin and tongue natural. Bowels freely evacuated by the Castor oil. The patient expresses himself as feeling "well, barring these jerks."

The tetanic spasms evidently arise from the lacerated palmar wound, but no foreign matters or other source of irritation can be detected. The wound itself is in a state of unhealthy suppuration with a slight tendency to a sloughing condition of its margins; the pus thin and sanious, the granulations studding the center, pale, flabby and exuberant; integuments of the arm and forearm perfectly healthy.

Ordered—100 drops of Tinct. Opii—to be repeated in the dose of 50 drops every half hour, till the spasms subside or narcotism be induced. Locally—

℞. Pulv. Opii ʒj.
Aquæ bullientis ℥iv.
M. ft. infusion,

to be added to a flaxseed poultice, and applied warm to

the wound. A blister, eight inches by four, to the nape of the neck.

4 o'clock, P.M. Visited the patient, and found him perfectly easy, with an entire intermission of the symptoms; had slept soundly during the afternoon, but was awake at the time of visit. Opiate treatment directed to be continued.

20th.—2 o'clock. The intermission of the spasms continued till 3 o'clock this morning—an interval of about fifteen hours since relief was first afforded the patient. He dosed at intervals during the night, but his slumber was disturbed by horrible dreams of suffocation and drowning. At 3 o'clock, A.M., as before mentioned, the symptoms recurred, at first so mild and transient in their character that the patient did not deem them worth mentioning, though expressly requested to do so. It was not until 5 o'clock that they became so painful as to induce the patient to call upon the house surgeon, Dr. Selby.

Finding the opiate treatment ineffectual, the patient was directed to take the following, internally:

℞. Fol. Tabaci ʒj,
Aq. bull., ℥iv.
M. ft. infusion.

℥j every half hour, to complete relaxation of the system.

Present condition. Skin and pulse natural; mind perfectly clear. Paroxysms of contraction affecting the whole body, of an intensity and violence far exceeding those of any previous period. No well marked emprosthotonos or opisthotonos. Muscles of the upper extremities more implicated than those of the rest of the body; patient opens his mouth and swallows without much difficulty.

The whole of the infusum tabaci, as prescribed, was taken without any sensible effect, either upon the disease, or upon the state of the system generally.

The patient was then directed to inhale chloroform till complete anæsthesia be produced, and to repeat it whenever the spasms recurred. Also to take internally,

℞. Tinct. assafetidæ, } 100 gtt.
Tinct. opii, }

and repeat the same in the dose of fifty drops of each, every half hour.

21st.—The tetanic symptoms began to remit about 8 o'clock in the afternoon of yesterday, and at 9 o'clock ceased entirely. He dozed in a restless state during the night, but enjoyed no sound and refreshing sleep. The medicine was administered to him regularly during the night, except when dozing, but the chloroform was discontinued after four inhalations. At the time of the visit, a distinctly perceptible tremor, rather than a well characterised muscular contraction, pervaded the entire body, interrupted at intervals of an hour or two, by violent though transient spasms. Muscles of the jaws but slightly affected; he converses without much difficulty though the effort is apt to excite convulsive twitches of the muscles concerned in deglutition. Continue the prescription of yesterday, and let him take in addition

℞. Sulph. quiniæ, gr.ii, every two hours.

Brandy and arrow-root as nourishment, p. v. n.

22d.—Patient remained in the same state as at last visit, during the greater part of yesterday. At 8 P.M., after awaking from a restless and disturbed sleep, tetanic contractions supervened of a more violent and aggravated form, but soon remitted into a slight vibratory motion of the muscles.

Present condition.—Trismus more marked than at last visit, yet he is still able to swallow liquids without much inconvenience. Pulse 108, soft and compressible; respiration natural; skin moist and warm. Bowels have not been moved since the exhibition of the Ol. Ricini, at the onset of the disease.

Ordered—℞. Olei croton Tiglii, gtt. ij,
Olei Ricini, ℥j.
M.

To be repeated, if necessary.

Also, an injection of fol. tabaci, in the proportion of two ounces of the tobacco to one pint of boiling water.—Cont. alia.

The tetanic symptoms gradually increased in severity till between 2 and 3 o'clock, P.M., when he expired. His mind continued clear, and his mental faculties unimpaired in vigor, until within about half an hour of his death.

Sectio-Cadaveris twenty-one hours after death.—Whole body, especially the abdomen, much swollen and very tense. Muscles of neck and abdomen rigidly contracted, while those of the arms and legs were in a normal state.

The wound of the hand partially cicatrized, but with a superficial slough adhering to its surface, and emitting a strong and offensive odor. Tracing the course of the nervous irritation upwards to the cerebro-spinal axis, the nervous trunks were found remarkably vascular; minute vessels could be seen ramifying, in a beautifully arborescent manner, over the entire circumference, imparting an uniform pink tinge to the exterior. Upon making a section of the nerve, its structure was found, to all appearance, perfectly healthy, both as regards color and consistence. The nerve endowing the little finger, was completely but irregularly divided by ulceration at the site of the wound; at the cardiac extremity of the division, existed a bulbous enlargement, three-fourths of an inch in extent, elliptical in shape, and compressed laterally; the flattening seemed the result of pressure from a fragment of rock, the size of a small pea, resting directly upon the diseased nerve. The exterior of the tumor was of a grayish pink color, mottled with black, from the grains of powder deeply imbedded

in the surrounding textures; the interior resembled the ordinary nervous tissue, each filament slightly separated from the adjoining, and the interstices filled with a yellowish substance, probably adipose.

Spinal Column.—The spinous processes and a part of the laminæ of the vertebræ having been removed, a pretty uniform layer of coagulated blood, one and a half lines in thickness, was discovered extending from opposite the axis to about six inches below the vertebra prominens. At the other parts of the extent of the spinal canal, the coagula no longer existed, but the surface presented an extremely congested appearance. Upon making a longitudinal section of the dura mater, the spinal cord presented a beautiful net-work of enlarged and tortuous vessels coursing their way over its exterior; the net-work was most apparent opposite the origin of the brachial plexus and at the commencement of the cauda equina. Internally the cord was of a healthy appearance.

Encephalon.—Upper part and base of the brain slightly congested; no effusion of serum or pus; sinuses distended with blood. At the base of the brain, blood to the amount of perhaps one drachm was effused, occupying chiefly the posterior subarachnoidean space.

I may state that the propriety of amputation of the arm was discussed, at the time Prof. Eve was first made aware of the existence of tetanus, but inasmuch as the disease had already existed twenty-four hours, and had involved the entire arm and forearm, resort to the knife was deemed inexpedient. As all the details, even the most trivial, appertaining to a disease with whose pathology we are so slightly acquainted, must be of importance, I will conclude this sketch, already perhaps too much extended, by an account of the weather during the progress of the disease. On the day upon which the accession of the tetanus occurred, the wind was south

west; in the forenoon some rain fell, but soon ceased, though the sky continued overcast and the atmosphere warm and damp. Upon the following day the sun shone out brightly, giving fair but deceptive promise of fine weather; for until the fatal termination of the case, it continued most variable, though in the main, clear and pleasant. The course of the wind was not particularly noted, though it was generally observed to be from the north west.

January 25, 1851.

ART. IV.—*A Case of Traumatic Tetanus, and recovery.* By THEODORE S. BELL, M.D., of Louisville, Ky.

A young man, named John Varali, aged 22 years, called at my office in the latter part of October, on account of a severe wound of the hand, which had been inflicted with a circular saw. The thumb was severely cut; the first bone being crushed into fine spiculæ, and two of the fingers were injured in a less degree. Feeling anxious to save the injured members, I dressed each one with the roller bandage. The hope of success did not rest upon a very firm foundation, for the young man had been unhealthy from infancy. He has for many years been subject to a singular species of chorea. But the wounds referred to, seemed to do very well for some days, and the treatment, by the bandage, was continued for two weeks. About the end of that time, the thumb was threatened with gangrene, and, in spite of quinine, wine, and nutritious diet, the end of the thumb was destroyed by mortification. But at the point of separation healthy pus was found, and the condition of the granulations was promising. Fomentations were constantly applied to the thumb for several days, but

trismus manifested itself in the third week of the wound. The fingers were entirely healed at the time the trismus commenced. The trismus was accompanied by all the symptoms that are usually present in such cases. The jaws were rigid, the tongue stiff, the deglutition of liquid, even, was a matter of great difficulty, and there was stricture of the chest.

After the spasmodic condition of the jaw was well established, emprosthotonos and opisthotonos manifested their presence by unmistakeable signs, and in a considerable experience with tetanus, I have never seen those convulsive actions as constant and severe in any other case. There were times when the face of the patient was drawn nearly to his toes; at other times the back of the head was thrown nearly to the heels. The convulsive action was so great that a table standing near the patient was often thrown across the room, by the sudden accession of a spasm. The patient sometimes sat in a large rocking chair, and was held in it during the spasm; at other times he sat on a lounge, near a partition wall, and the opisthotonos was so violent that a hole was broken through the partition, on one occasion, by the backward movement of the head. The sufferings of the patient were beyond anything I have ever witnessed. He had no rest day or night, and for weeks, neither the trismus, the opisthotonos, nor emprosthotonos seemed to yield in any degree.

In the early part of the tetanic features, my own sufferings with a carbuncle on the left hand were so great, that I was compelled to request Professor J. B. Flint to take charge of Varali for me. He very properly ordered a solution of the extract of the Canabis Indica, in doses of 2½ grains of the extract, every two or three hours. Dr. Flint was impressed with the belief that this extract was of some service, and when I resumed the treatment of the case, I continued it. But for a consid-

erable length of time I saw but little if any mitigation. The spasms were as frequent, and seemed to be as violent as at any time of their career, while under my observation. Partial ease was obtained for a short time, immediately after the action of purgatives. The constipation was unusually great, even for a case of tetanus. On this account, I abandoned all the ordinary preparations of opium, and resorted to McMann's elixir. At the same time I doubled the dose of the Canabis Indica. By purging the patient freely, in the afternoon of almost every day, and the use of the elixir at night, I was able to procure him some sleep, and he often slept several hours at a time. The spasms were less frequent, but were not mitigated in their violence, nor did the trismus abate in any degree. The emprosthotonos was the first variety of the spasms that disappeared, and at the end of four weeks from the commencement of the tetanic attack, the trismus and opisthotonos were considerably mitigated, and finally disappeared.

Throughout the whole of this attack the patient was actively treated. The wound was regularly dressed with warm poultices, and sometimes with the addition of laudanum to the poultice. The patient was a member of the Washington Fire Company, and was, of course, well nursed. His family were unremitting in their attentions. All that could be done by medicine, was done, all that faithful and judicious nursing could do, was freely rendered. The strength was supported by nourishment adapted to the case, and wine of a superior quality formed a leading element of the nourishment. In the repeated efforts to give the sufferer sleep by the use of narcotics, the constipation that naturally belongs to tetanus was increased, and all the ordinary preparations of opium were abandoned on this account, and with the less regret, from the fact that they seemed to render no service to the case. I am not prepared to say that much was done, in

controlling the tetanus, by the Canabis Indica, while in my charge, though I faithfully used it up to the termination of the case. There were times in which it was not given for 12 or 16 hours, and the evils were not increased by the omission. But a neglect of purgatives invariably aggravated the spasms, and their action was always followed by decided mitigation for irregular intervals of time. The Elixir of Opium also, usually gave ease, and was generally followed by some sleep.

Throughout the whole of this tetanic attack, the wound of the thumb remained stationary. It seemed to grow, neither better nor worse, during the existence of tetanus through its term of four weeks, and I continued to dress the wound, for more than a month after the tetanus had disappeared. The thumb is now well, with the loss of the first joint.

I have called this a case of tetanus, because all the symptoms of that malady were present in a marked degree. But it is possible that the attack may have been an aggravation of the long standing chorea, and may have simulated tetanus, or the chorea may have exerted some influence on the tetanus. The trismus came on more sluggishly than is usual, but I have seen considerable varieties in this feature. I have seen it come in all its fulness at the very onset of its appearance, and I have seen it develop itself gradually, but never so slowly as in the young man whose case is under consideration. The recovery of this patient surprised me very much, as it did every body who knew any thing of the case.

In presenting a portraiture of this remarkable case, it is proper to mention that some five or six years since, I attended young Varali in a case something like the one recorded above. He was suffering then from a wound, and had well marked tetanic symptoms, from which he recovered much sooner, than from the recent attack. I entertained no doubt about the tetanic character of the

first attack, nor do I know that there is much reason for a doubt about the second.

It is gratifying to add, that the health of the subject of these remarks is much better since his recent recovery, than I have known it to be for ten years.

ART. V.—*Convulsions; and the remarkable effects of Chloroform in the Case.* By THEODORE S. BELL, M. D., of Louisville, Ky.

Dr. William R. Jacob, of this city, was attacked about the beginning of January, with epileptic convulsions. Several days after the attack, I was requested to visit the case with Dr. Flint. A very remarkable feature presented itself; in the intervals between the spasms; the patient was as motionless and as unconscious as a log. He could neither hear, feel, nor speak, without the use of chloroform, and the inhalation of that always restored him to perfect consciousness, and enabled him to converse with freedom. As soon as the effects of the chloroform passed off, the patient relapsed into utter unconsciousness, from which he could be revived only by chloroform. But I was soon convinced that the use of chloroform was doing more harm than good; the condition of the brain was growing worse under its use, and peremptory directions were given for its discontinuance. In consultation with Dr. Flint, the application of leeches was ordered; they acted well, and I went to the patient, at night, for the purpose of bleeding him, if the leeching had failed to give relief. A brief examination satisfied me that bleeding from the arm was not only indicated, but that it was the only measure that could save the life of the patient. Just as I was preparing to order the bowl and bandages, Dr. J. W. Knight came in, examined the case, and obtained a history of it from me. In our retirement, I stated to him that I was getting ready when he arrived,

themselves in M. Ricord's wards, and one of urinary fistula. The whole of these were serious examples of their respective diseases, and formed the subject of a clinical lecture. I am happy to say that the eminent Professor of the Hôpital du Midi corroborated many of the opinions I expressed during the last winter, on the subject of treatment. In the ordinary cases, he employs simple dilatation by means of conical gum-elastic bougies, with a little olive-shaped point, such as I now produce; when retraction takes place, the case is treated by incision with instruments passed down the urethra, and he has lately introduced several modifications in the shape of the instruments with which the stricture is to be incised. Nitrate of silver is rarely employed in stricture; and on the subject of potassa fusa, M. Ricord agrees with modern surgeons, that in small quantities the kali becomes saponified, and is insufficient; that in larger masses, when pressed against the obstruction, it is attended with the most serious consequences and is not a remedy at all adapted to overcome the impassable strictures which every now and then come before the surgeon.

I mentioned to M. Ricord the fatal results which had in London attended the operation of incising the perineum as recommended by Professor Syme. He thought that one or two unsuccessful cases should not deter us from prosecuting the plan, provided all others had failed. He acknowledged that very puzzling cases every now and then came before us, and he cited an instance in his own practice, where death followed from incising the stricture by instruments introduced through the urethra, the fatal result (just as in the London cases) following from typhoid symptoms.

But the numerous late instances of repeated deaths pointed out the caution that should be exercised, and he was by no means convinced that the stricture would not return after a certain period. Still, (added he, in his peculiar laughing way, which often winds up a learned disquision on a plan of treatment,) I should much rather find my patient complaining of the return of the stricture, than the surgeon regretting the non-return of his patient, as you state is the case in London.

curing him, although given for long periods under the advice of other practitioners. I mention these cases because prejudices exist against the employment of the remedy, whereas, in France, Ricord gives it in anything but homœopathic doses, and with the most signal success.

Phagedænic Chancre.—At the time I visited the wards, only two cases existed of this disease, but generally it is much more frequently met with. Under this head may be included all those anomalous sores met with in London, or elsewhere, which are classed as irritable chancres, occurring in bad constitutions, indisposed to heal, spreading, instead of healing kindly, and causing the greatest annoyance to both surgeon and patient. In consultation practice in London, these are the cases I am most frequently consulted about to sanction the use of mercury. All sorts of washes have been used, caustic has been applied, but without avail, and the case is getting worse. In all such instances, iron is the remedy, and its effects are perfectly magical. I need not say that mercury aggravates such cases. Of all preparations, the tartrate of iron is best given in the following manner:—potassio tartrate of iron, 1 ounce; water, 6 ounces. Mix. Two tablespoonsful three times a day.

M. Ricord largely employs it, and prescribes it now, even in the treatment of simple cases of chancre; he uses it, likewise, as a local application, as well as an internal remedy.

Chronic Catarrh of the Bladder.—Ricord now uses caustic injections into the viscus itself. Having emptied the organ of urine, he passes a gum-elastic catheter, and then, with a glass syringe, throws the injection into the bladder, and repeats it, according to circumstances, every three or four or six days. There is some pain and irritation set up; the urine becomes a little bloody, but the ropy secretions soon ceases. The different preparations of turpentine are given, and I saw four cases in their different stages. He has not met with any ill consequences of the treatment, although the injections used are composed of nitrate of silver, 2 drachms; distilled water, 4 ounces. Mix for an injection.

Strictures.—On the day I took notes of the cases, only three instances of stricture of the urethra presented

ties explain why fumigations have fallen into disuse, as the proper means of application are not always at hand.

Tertiary Symptoms may be seen in the wards in all their variety; and I noticed one which will form the subject of a separate communication; viz: of amaurosis, depending upon disease of the sphenoid bone. Suffice it, at present, to say that iodide of potash is our sheet-anchor, given *in large doses.* It is a very general belief in London, among our leading surgeons, that all the good that iodide of potash can do, will accrue if three or five grains be given, three times a day; more than that, I am daily told, will do harm, or if more be given with impunity, the article is spurious. I do not wish to underrate the good effects of the salt often resulting from small doses, but I am as equally convinced that large doses may be given with impunity. I lately had a gentleman from Scotland under my care, who took the remedy in such quantities that he purchased it by the half pound, and yet it was a genuine article; but I will go further than this, and assert, from a pretty large experience of its effects, that small doses will not do any or the slightest good in many instances. I have now under my care a patient with affection of the nose, and destruction of the ossi nasi, who had been taking these small doses of iodide of potash for many months, under a late lamented surgeon, and the disease remained pretty nearly in *statu quo.* She came under my care, and the affection is now on the point of complete recovery under increased doses.

I met Mr. Wallace in consulation a short time since, in reference to a case of tertiary symptoms of the nose and brow, which iodine had relieved, but not cured, although taken in these small doses by direction of another surgeon for nine months; here the salt had been obliged to be left off, because iodic intoxication was said to have been produced, together with symptoms of affection of the brain. Now in these instances, time, rather than the dose, was in fault, and the surgeon who entertains these ideas scruples not to prescribe iodide of potash for years, rather than give it in larger doses.

I saw, with Mr. Vickers, a gentleman who has now entirely recovered, to whom we gave large doses of iodide of potash with bitters, yet small doses had failed in

ideas long since given to the public, but he now further assists their action by prescribing more frequently.

Fumigations.—This mode of giving mercury is so rarely followed in London, at the present day, that perhaps few of my readers are aware of the means employed.

The patient is placed naked in a box, his head being the only part exposed to the air. This box is heated by a furnace below, on which the bisulphuret of mercury is placed, in proportions of three drachms. The heat soon volatilizes the mineral, and the fumes come in contact with the skin. The patient is allowed to remain twenty minutes in a box, and a tumblerful of water is given him. In a few minutes perspiration comes on, and the patient is then taken out and well rubbed down; and the fumigation may be repeated twice a week for a month or six weeks, according to circumstances. In old chronic affections which do not yield to mercury, given internally, the most marvellous effects are often produced, and I have seen cases (resisting all other treatment) get rapidly well under this plan; and I would recommend a trial to my professional brethren in the numerous instances that come before them of obstinate complaints. I am, however, by no means convinced of its general application, or that it is likely to supersede the mineral, given internally. It has been said that patients may employ fumigations, and yet pursue their ordinary occupations. One case that has lately come under my notice induces me to recommend that patients, after employing the cinnabar, should not expose themselves to the open air. I fear, likewise, that in country practice the use of it must be circumscribed. A fixed apparatus will be necessary, as the volatilization of the mercury is difficult, in consequence of the great quantity of heat required. The ordinary spirit-lamp appears insufficient. I lately placed a patient in a vapor-bath, and after weighing three drachms of the cinnabar, placed it on the plate, over a strong spirit-lamp. In twenty minutes the substance had only lost one scruple in weight, independently of waste, thus showing that this is a very imperfect way of volatilizing the mercury, the vapor of which is so heavy that it will not rise more than one foot, unless carried up by a strong current of air. These peculiari-

all writers on syphilis, he lays the greatest stress on this symptom; but differing from all his predecessors, he does not consider all hardness attending a chancre to be induration. To diagnose this true symytom of syphilis, he looks for, and points out to the pupils, the enlargement of the glands in the groins, occurring a few days after the induration on the penis. These buboes rarely suppurate; when matter forms it is the result of inflammation superadded to the disease, and is an accident, whereas the enlargement in the groin is a constant attendant upon indurated chancre. When this symptom is not to be detected, he often keeps the patient in the wards, to show that the false ulceration will subside of itself, and secondary symptoms not occur.

I said above that you may study, in these thirty-three cases of indurated chancre, the disease in all its varied consequences. In by far the majority of cases, secondary symptoms had already appeared; and on reference to the table, twenty-one cases are noted down in which secondary symptoms were the most prominent feature; here indurated chancre had previously existed. In these cases of constitutional syphilis, M. Ricord dwells particularly on a character not noticed by previous writers—namely, enlargement of the glands at the back of the neck, a very constant occurrence in secondary symptoms, and one that comes on early—say five weeks—after general contamination of the system. The treatment of all these cases consists in ordering the mineral, in the form of proto-ioduret of mercury, a preparation he almost exclusively gives, but one which in England I have been unable to prescribe, as the same pills which patients bring from Paris act too violently on the bowels in this country, inducing colic and diarrhea,—consequences rarely seen in Paris, and which we must attribute to climate and difference in diet in the two capitals. I need not here dwell on the long period mercury, he thinks, must be given in cases of indurated chancre or secondary symptoms, and continued even after their disappearance; three or six months' persistence will scarcely be long enough to eradicate the syphilitic diathesis, and prevent relapses when the constitution has been once infected. All his further experience has only convinced the professor of the Hôpital du Midi of the correctness of his

just enough to fee the surgeon. Late events in Paris have caused a great diminution in the practice of the French surgeon; he is called on to give a great deal of gratuitous advice. M. Ricord tells me he has always made it a rule to prescribe for patients who apply; and he never demands a fee, but on his table are seen sums varying from ten francs to Napoleons and sovereigns, which patients place there on leaving.

Asking pardon for this digression, I must return to the more proper subject of this paper. The 2d of April, 1850, the day I visited M. Ricord's wards, was Easter Monday, and the French, like the English, make it a holiday; there were a few beds vacant, but the following is the *resumé* of the cases.

Indurated chancre - - - -	33
Secondary symptoms - - - -	21
Bubo - - - - - - -	8
Vesicle catarrh - - - - -	4
Phagedænic chancre - - - -	2
Epididymitis - - - - -	7
Urinary fistula - - - - -	1
Vegetations - - - - -	2
Tertiary symptoms - - -	8
Iritis - - - - - - -	1
Simple chancre, non-indurated - -	11
Gonorrhœa præputialis - - -	3
Scrofulous affection of the testis - -	1
Blennorrhagia - - - - -	3
Stricture - - - - - -	1
Chancre of the anus - - - -	3
Gonorrhœal rheumatism - - -	1
Albuminuria - - - - -	1
Hæmorrhoids - - - - -	1
	112

The first thing which strikes the most casual observer, on loooking over the cases, is the large proportions of indurated chancres—thirty-three cases in the wards at one time. Here the student may study induration in all its forms. The frequency of this symptom in the wards depends upon M. Ricord admitting by preference, as patients, those who suffer under this form of chancre. Like

pertinence are equally absent. Let a patient, however, be refractory to treatment, or object to follow the prescribed routine, the light raillery gives place to just indignation, and he receives such a public admonition as serves for a warning to the inmates of the whole ward, who equally respect the kindness and the talent of the professor. The in-patients are recruited from the out-patients who are seen daily at the hospital, by one or other of the surgeons; they amount to enormous numbers, and the most severe cases are those admitted.

A surgeon attached to a large hospital, with a considerable private practice, is a very hard-worked man in Paris. Let me give you some idea of Ricord's way of spending his day. He leaves his home in the morning, between seven and eight; he first has to visit his Maison de Santé, which, I need not observe, is a private establishment for single persons who wish to have comforts and attendance they cannot procure when sick at their own homes; at eight he enters the wards of his hospital, and often remains there till eleven. His carriage is in waiting; and then he visits his patients in Paris until three o'clock; he now returns to a hasty breakfast, and is occupied at home until seven, eight, or ten o'clock in the evening; and he assured me that he was rarely able to dine out, in consequence of his patients occupying his time to so late an hour. He has now to answer his correspondents, and prepare matter for the press, and here for the first time he can obtain assistance. Now, although Ricord is nearly fifty, and has led this sort of life, to my knowledge, for twelve years, he is as young-looking as ever; his brown hair remains unchanged; he has no care-worn appearance, but is as cheerful as ever; the same sparkling wit as formerly; and never has a surgeon been more adored by his patients, who feel convinced that he does nothing all day but consider their own particular complaints.

A French surgeon's consultation room is well adapted to the purpose: placed in the centre of several others, with doors opening into each, patients are admitted and divided into little parties. *Egalité* is not strictly observed here, particularly if the servant be feed, a practice as common in Paris as it is in London consultation rooms. The rich man need not wait so long as he who has only

cines, which are not dispensed at the institution. In most other French hospitals sisters of charity attend upon the sick; in this institution the duties are performed by men. The wards are very lofty and long, containing about twenty-five beds each. The committee require the patients to be seen daily; and it is the custom with French surgeons to go round the wards early in the morning, from eight to eleven. On Monday, in the wards of M. Ricord, every patient is seen; on Tuesday, only such as require any alteration in the treatment; on Wednesday, those that were admitted the previous day, when he himself, assisted by his house-surgeon, prescribes for all out-patients that apply. It struck me as singular, that since the revolution the students no longer take off their hats while in the wards, thus showing neither respect to the surgeon nor to the institution; yet that common mark of politeness of lifting the hat when entering a café, is kept up. Of course, in the wards of a Venereal Hospital, many are to be found who have taken, and will take, a part in a street row, barricade, or revolution; yet the greatest order reigns in the institution; any disturbance is met with immediate dismissal by the resident civil officer; and the patients well know that soldiers in the adjoining corps de garde would be instantly called in to expel any refractory patient, notwithstanding the words Liberté, Egalité, Fraternité, written on the public buildings. The brotherly feeling, almost amounting to familiarity, observed by Ricord to his patients, is seldom abused; he will laugh at, or with a patient, ridicule another's imaginary fears, and the students will participate in his mirth, and the patient will smile; and all goes on smoothly. References are often made by all parties to the political events of the day, and censure is bestowed on the administration, the house-surgeon, dresser, or on the treatment followed in other hospitals; then comes a clinical lecture at the bedside of the patient, if the case is deserving of it; and the patient is cognisant of all that is said and done. Students are rather encouraged to put questions; and the wit and talent of the professor dreading no *contretemps*, everything is open to canvass; but impertinent observations are never indulged in, for were they employed, a laugh raised at the poor coxcomb's expense, would prevent a repetition of it—*mauvaise honte* and im-

SELECTIONS

FROM

FOREIGN AND HOME MEDICAL JOURNALS.

On the Present Condition and Treatment of Venereal Diseases in Paris. From Notes taken during a recent visit to the French metropolis. By William Acton, Esq., late Surgeon to the Islington Dispensary, and formerly Externe to the Venereal Hospitals of Paris.—In preparing a second edition of my work on Venereal Diseases, I thought it advisable to pay a visit to the French capital, to observe for myself what improvements my late master, M. Ricord, had been making, during the last two years and a half, in the treatment of syphilis. Although the medical journals every now and then describe any new plan of treatment he may prescribe, still they give but an imperfect idea of the progress medical science is making; and the following notes may not prove uninteresting to the profession, founded, as they are, on the results of my own observation.

The civil authorities of Paris levy a duty on provisions entering the city. The tax goes towards defraying the expense of the hospitals, which are not supported by voluntary contributions, as in this country. The administration has founded large syphilitic institutions, both for men and women. The one I am about to describe is entirely given up to the treatment of men suffering under venereal diseases. The Hôpital du Midi contains nearly 400 beds, and there are at present three surgeons attached to it—M. Ricord, Vidal de Cassis, and Puche. The in-patients are treated gratuitously; the out-patients have only advice given—they are obliged to pay for the medi-

lesion in the ventricle or ventricles that caused the hemiplegia, it is difficult to determine. The effect, however, was transient, for the paralysis returned with the recent attack, and remains at this time. It is certainly important that correct conclusions shall be drawn on this point, but the difficulties attendant upon a diagnosis may be estimated from what Andral says, on the lesions, which, in cases of meningitis, coincide with the different alterations in the power of motion. Andral remarks: "beyond that lesion which the scalpel points out as having its seat in the membranes of the brain, there is, in the brain itself, a modification, not recognisable by the anatomist, which is produced, to be sure, by the lesion of the membrane, but which, variable in each individual, is the real cause of all the functional disturbances which are seen to supervene." And it must be remembered that the phenomena described in the case under consideration may be the result of alterations in the substance of the brain itself.

There is reason to hope, whatever the lesion may be, or wherever located, that it is of a removable character. Its sudden and perfect removal in the train of the formidable symptoms that assailed the first attack described in this report, justifies the belief that medication and proper care may again remove it. The patient is now restricted to a nutritious diet, devoid of all stimulants, and the medication relied on is that produced by the Iodide of Potassium. A slight ptyalism is now present, from the use of one dose of calomel. The salivation may aid the Iodide. A further report of the case will be given hereafter, and I entertain a confident hope that the future report will record the recovery of the patient.

January 28th, 1851.

blood-letting from the arm. This attack proved to be much milder than the former one, and was speedily relieved. Although this attack was more the result of spinal irritation, than the former was, the same degree of unconsciousness presented itself, and the chloroform had the same singular effect as that described in the account of the other attack. But in the recent case, the chloroform was used but two or three times, and only for the purpose of putting the physicians in connection, as the Mesmerists say, with the patient. When he was not under the influence of that agent, he seemed perfectly dead to all surrounding objects. When I administered it first in the recent attack, the patient was astonished to hear that he had again been seized with convulsions.

The subject of these attacks of spasms is a young physician, who had generally enjoyed good health before his seizure. On the 15th of last March he was suddenly attacked, when in apparent health; the convulsions were severe, and terminated in hemiplegia. Occasional returns of the convulsions manifested themselves, but the first attack in January was the most formidable the patient had experienced. For a length of time the prognosis was unfavorable. The symptoms of *ramollissement du cerveau* seemed unmistakably present at times. The permanent flexion of the arm of the paralysed side, a tendency to flexion of the leg, and cephalagia fixed to one point, led to the suspicion of softening of the brain, and the absence of other symptoms inclined towards a confirmation of this view. The symptoms during the attack, early in January, very closely resemble those described in the 11th case of Andral's Medical Clinic, on the diseases of the encephalic membranes. But it is evident that the case of Dr. Jacob does not belong to the form of disease described by Andral, for the paralysis disappeared completely, with the disappearance of the other symptoms. What particular agent removed or corrected the

to bleed from the arm, and he gave his cordial assent to the measure. As soon as the means could be prepared, I bled the patient from a large orifice in the arm, and drew off a large quantity of very black blood, its condition being mainly due to the chloroform.

This bleeding gave great relief to the head, and brought on a crisis in the case. When I reached the patient next morning I was informed he was dying, and there were certainly strong indications of approaching death. The breathing was short and rapid, and frequently suspirous, the pulse almost imperceptible, the eyes glazed, and all the vital powers sinking. By the seasonable use of sinapisms to the arms and legs, hot applications to the feet, and internal stimulants, the untoward symptoms disappeared, and the amendment gave some hope of ultimate recovery. But the subsidense of the convulsive movements left in its train an irritable stomach which rejected every thing that was taken for several days. This irritability of the stomach resisted all attempts at relief, until we gave quinine and creosote, a prescription agreed upon in a consultation between Dr. Flint and myself. The second dose relieved the sickness, and the patient improved rapidly under the use of food. A hemiplegia of the left side, of some months standing disappeared, and the patient emerged from this attack in better condition than he had been in for a considerable length of time.

In dismissing Dr. Jacob from further medical treatment, he was warned to watch for the least aberration from health, and to have it attended to at once. This warning was neglected. On the evening of the 22nd of January, he complained of headache, and gave way to the illusion that it was caused by the noise of some children about the house. On the morning of the 23d he had no appetite, and refused his breakfast, and about 11 o'clock, that day, the spasms returned with great violence. I was immediately summoned to the case, and again resorted to

I regret being obliged to omit many important observations which I made during my stay, as well as other remarks on the out-patients, but I hope I have said enough to show how much society and the medical profession are indebted to M. Ricord for the manner in which he has successfully carried out the treatment of venereal diseases, and following in the footsteps of the immortal John Hunter, has recalled the attention of the profession to a class of diseases that of late years had become the especial domain of quacks.—*London Lancet*, December, 1850.

Epilepsy with Spectral Illusions.—Under the care of Dr. Owen Rees. Dr. Owen Rees has lately had to treat a case of epilepsy complicated in a manner which is not very often met with, the patient being troubled with spectral illusions. Though such a complication is somewhat rare, it will not cause much surprise to the pathologist, for the fact of epilepsy being so frequently followed by insanity, naturally leads to the inference that any of the various kinds of mental delusions may complicate the disease. Dr. Copland, in his elaborate Dictionary, mentions most of the complications of epilepsy, as mania, apoplexy, paralysis, etc., and as spectral delusions are not mentioned, it is therefore supposed that they have been rarely seen in connexion with epilepsy. We proceed to give a sketch of the case, and avail ourselves of the notes of Mr. W. Rhys, the clinical clerk.

Rebecca L—— is 20 years of age; she has the face of dark struma, having black hair, and eyes of the same color; she is tall and well developed, and has menstruated regularly since her fourteenth year. She has always resided in Bethnal Green, being well fed and not overworked, but a tendency to cerebral affections is hereditary in her family. Her father had had several fits of apoplexy before he ultimately died paralyzed; a brother of the patient, now living, is subject to epileptic seizures, and there is one sister affected with phthisis. Patient, however, enjoyed tolerable good health as an infant, and affords another example of the fact that a predisposition to head affection will lie dormant, until

the encephalon has reached a certain development, and even then, as will be seen by the sequel, exciting causes (sometimes of a traumatic kind) are necessary to give full scope to the morbid tendencies. In her ninth year, the patient was knocked down in the streets by a butcher's boy. the shock rendered her completely insensible, and she continued in an unconscious state for four hours and a half. Soon after this accident, she became subject to hysterical fits, and at the termination of the second year from the date of the blow, she had a genuine epileptic fit.

It is instructive to watch in this case the mysterious development of the nervous affection: 1st, heredity; 2d, a blow; 3d, a lesion of some part of the nervous center made apparent by a sort of subdued epileptic affection—viz: hysterical fits; 4th, the chronic disorder (slowly brought on in the encephalic mass by the lesion) working on a predisposed individual, and rendered cognizable by epileptic seizures. Thus are we able to follow, step by step, the effects of certain influences on the brain, but as to the exact nature of this influence we must be content with conjectures.

Both the hysterical and epileptic fits now frequently recurred without observing any regularity in their alternations, this circumstance, again, showing that both affections are of the same nature, and that one or the other will appear, according to the greater or lesser excitement produced either by the ingesta or the circumstances in which the patient is placed. The epileptic fits became soon very frequent; they would seize upon the patient sometimes four times a week, and often as many times *a day*. About four years ago she was under treatment, during which time she was entirely free from fits.

In October last the poor girl met with another accident; a heavy shutter fell upon her, and brought her to the ground. She succeeded in reaching her residence, which was not far off; but on entering into her room she fainted, and continued insensible for a considerable time. Sometime prior to this second accident, she used to fancy that she saw the characters of whom she was reading, as kings, etc., etc., in books of history, placed high up on the wall of the room, and seemingly watching her.

She rarely saw but the head and shoulders, and these appearances caused her no terror. After the accident, however, which we have just mentioned, they became more fearful in their character, sterner, more menacing, and were in general very ugly. The subjects of these spectral illusions soon became more numerous; she used to meet them on the stairs and about the house, so that at last she became afraid of moving about alone. When she happened partially to preserve consciousness during the fits, the spectra became uglier and more threatening in their looks than at any other time.

After this, the patient had been some short time under Dr. Rees's care, and had taken purgatives and tonics; she was ordered to have an issue on the vertex, and was mildly salivated with the compound soda powder of Guy's Hospital Pharmacopeia: calomel, 1 grain; dried soda, 5 grains; compound chalk powder, 10 grains.—This treatment was attended with marked benefit; the epileptic seizures, which had hitherto occurred three or four times a week, altogether ceased, and the more formidable of the spectral illusions left her likewise. Dr. Rees thought it advisable to keep up the effect of the mercury.

On the 18th of January, about seven weeks after the girl was first seen, her mouth became very sore, the use of the metal was suspended, and the patient took small doses of Epsom salts in infusion of roses, and had a borax gargle prescribed. About twenty days after this, the issue was allowed to heal, and a fortnight afterwards the illusions, which had almost vanished, began to trouble her again, and she now complained of headache. Dr. Rees ordered sixteen grains of the soda powder to be taken every other night, and the illusions still persisting, another issue was ordered to be placed on the vertex, and the powders to be continued. Under this treatment and the subsequent exhibition of the mineral acids, the patient went on improving until the latter end of May, when the spectra no longer appeared.

About a fortnight before the girl was finally discharged, the seton was allowed to heal up; this circumstance gave, however, rise to no unpleasant symptoms, and Dr. Rees had the satisfaction of having conquered, at

least for the present, one of the most intractable diseases to which the human race is liable.

The judicious administration of mercury had decidedly a very beneficial effect in this case, and though the use of this metal is founded on conjecture only, we may well agree with Dr. Copland, who says, speaking of epilepsy—

"When we reflect on the frequency of serous effusion in the cavities, and of alterations of the coverings of the brain, in fatal cases, a judiciously conducted course of mercury, independently of the evidence of Willis, Riedlin, Etmuller, etc., in its favor, promises some benefit. It is chiefly, however, in the active conditions, or when the malady presents the apoplectic, inflammatory, *maniacal* . . . complication that mercury given so as to affect the mouth is most likely to be serviceable."—*London Lancet*, December, 1850.

A cheap and simple article of Nourishment for Infants—Carrot Juice. By Dr. Gumprecht of Hamburg.—Being impressed with the consideration that the nature of the artificial nourishment of young children deprived of the breast has a most important effect on their health, the author was anxious to find some aliment more supportable by the tender organism of infants than cow's milk and amylaceous matters, which mostly tend to acidity. An observation of Schmidtmann, that the pulp of carrots is a favorite article of diet for young children in Turkey, and is much used there, led him to turn his attention to this substance, which, as is well known, from the analyses of Wackenröder and Liebig, is particularly rich in albumen and sugar. It contains, however, also a quantity of ligneous fibres (cellulose), which is indigestible, and may therefore prove injurious.

He therefore thought of employing the thickened juice of carrots in the following way: An ounce of finely-rasped carrot pulp is mixed with two cups of cold *soft* water, and left for twelve hours, during which it is occasionaly stirred, then strained through a sieve, and the juice expressed from the pulp. This juice is then mixed with a sufficiency of bruised biscuit, or bruised crust of white

bread, or a little arrowroot, a little sugar added, and the mixture heated, but not allowed to boil completely, so that the albuminous matter may not be coagulated. More sugar may be added if required.

The author considers the addition of biscuit or bread to be necessary, in order to furnish to the child all the requisite elements of nutrition—viz., albumen, starch, gluten, sugar, fat, and salts.

For sucklings deprived of the breast, the preparation is so far altered that the biscuit (1 part) is rubbed up with the carrot pulp (4 parts), then macerated and strained as above (we presume it is to be heated, though the author does not expressly say so.) To this juice the requisite amount of sugar, and a little salt are added, and the child fed with it from a sucking-bottle. Of course great cleanliness is requistie to prevent acidity being generated in the bottle, and for the same reason the juice, which readily undergoes fermentation, is to be kept in a very cool place, and prepared in small quantities at a time.

So far as the author's observation has gone, this system of nourishment has answered well, the children not only bearing it well, but taking the food readily, and he has received assurances of similar success from several of his professional brethren.

It is further stated by him that for older children the carrot pulp may be mixed with animal broth, and that large carrots answer better for the preparation of the juice than those which are young and small.

From the want of any direet experience of the above method, we cannot as yet express a judgment on the above proposition; but we must admit that the manufacture of the food does not appear (as the author seems to think) so easy that we can always reckon on its being successfully prepared. The chances of fermentation in such a juice are so great that it is to be feared it will hardly be avoided. We should regard any tendency to laxity of the bowels—so common an affection of children—as a complete contra-indication to its use. Further, there seems to be no reason why, even for young infants, some animal matter should not be added, in the form of broth or yolk of egg.—*Schmidt's Jahrbücher*, from *Journ. für Kinderkrankheiten*, July and August 1849.

In the *Journal für Kinderkrankheiten* for March and April, 1850, Dr. Gumprecht publishes letters from Dr. Müller, of Hamburg, Dr. Mauthner, of the Children's Hospital of Vienna, and Dr. Helmbrecht, of Brunswick, who state that they have followed his plan with satisfactory results. The last-named physician, however, remarks that if arrowroot is used to thicken the juice, it must be boiled, else the arrowroot will not dissolve, and this has the effect of coagulating the albuminous matter, which the author wishes to avoid. Dr. Helmbrecht suggests salep—a substance which is little used in this country, but which, we believe, is unjustly neglected.—*Monthly Journ. Med. Sci.*, Nov., 1850.

Treatment of Cardiac Dropsy.—Dr. Alexander Kilgour, in an interesting paper on Disease of the Heart and the dropsy following, in the *Monthly Journ. Med. Sci.* (Sept. 1850,) makes the following remarks on the treatment of the latter affection:—

"In the treatment of cardiac dropsy, every practitioner has his favorite remedy, taken from the class chiefly of diuretics or purgatives, or both. Of the former, I have found the following combination the most efficient. It pumps the patient out, so to speak, sometimes in a few hours; and it often will do so in repeated attacks of the anasarca.

℞.—Infusi digitalis, ℥iv; acetatis potassæ ʒij; spiritus ætheris nitrosi, ʒij; aquæ cassiæ ℥iss. Capiat cochleare magnum quartâ quâque horâ.

At last there comes an attack in which this and other diuretics cease to act, and we must then fall back on purgatives. Of the latter, unquestionably the most powerful is elaterium. But there surely must be a very great diversity in the strength of this medicine. Some practitioners, from the days of Sydenham, and long before him, downwards, appear to have given it in the dose of two grains, or even more; but I have found a single pill, according to the following formula, generally very powerful:—

℞.—Elaterii. gr. j; extracti colocynthidis comp. ℈ij. ss; extracti hyoscyami, gr. xij. M. Divide in pilulas xij. Capiat unam nocte mancque.

The great objection to the elaterium is the intense sickness, even in this small dose, produced by it. Do the large doses produce less sickness than the smaller? It may be so; but, in the few instances in which I have tried large doses, the sickness was not less. Is there any mode by which this sickening property in this valuable medicine could be removed? The same effect was found by the ancients in the well known and much used, but undeservedly now almost discarded, hellebore; and for the sickness occasioned by it we find it recommended (*Vide* "Oribasius," lib. viii. cap. v.) that, amongst other remedies, the patient should be entertained with a funny little story, or be tossed, like Sancho Panza, in a blanket.* Something more efficient than the former, and less disturbing than the latter, would be a desideratum.

It is the opinion of some that the elaterium acts as a diuretic, as well as a hydragogue chathartic. I remember, when in consultation with Dr. Adams, of Banchory, in a case of cardiac dropsy, having my attention called by him to a formula, where the elaterium was combined with a diuretic, which he had seen prescribed with very great success. I detected it at once as a formula given in Ferriar's valuable "Medical Histories." It acts most powerfully by stool and urine (being composed of several of the most powerful of the diuretics, along with the elaterium); but I always found it to cause much and violent sickness.

℞.—Extracti elaterii, gr. ij; spiritus ætheris nitrosi, ℥ij; tincturæ scillæ, oxymeliis colchici, ää ℥ss; syrupi rhamni, ℥i. M. Ft. Solutio. Capiat drachmam unam ex aquæ pauxillio, ter, quarterve in die.

The combination of a bitter purgative with a saline one composed of the vegetable alkali and a vegetable acid, is in my experience much more efficient than any single purgative, or than a bitter with a salt formed of a mineral

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* My learned friend, the translator of Hippoerates and Paulus Ægineta, writes, in a note, in his translation of the latter, "shaken in a garment;" but mine, I assert, is the more spirited version.

acid. The old compound powder of jalap is a well known instance of a mixture of this kind, and is still one of our best purgatives in all dropsies where this class of medicines may be suitable. Ferriar used, as did also Home, a combination of half an ounce of the bitartrate of potass with two grains of gamboge. The infusion of senna with bitartrate of potass is also an old-fashioned and valuable remedy; but the insolubility of the salt is an impediment to the efficiency of this formula. The senna infusion with tartrate of potass, or with the tartrate of potass and soda, is not liable to the same objection; and the advantage of the frequent use of this combination in cardiac disease having a tendency to dropsy, or in the dropsy itself attending that complaint, has been in my hands, and those of my brethren to whom I have recommended it, so unequivocal, that I can speak for it in the highest terms.

The preparations of mercury have proven, no doubt, very successful in the treatment of this form of dropsy, and consequently many practitioners give them a preference. Without wishing at all to detract from the merits of this most valuable agent, I must confess that, in chronic diseases of the heart, I have the same objection to it, and founded on the same grounds, as was that to the celebrated Dr. Fell, or, to use the more classic words of Martial—

> "Non amo te, Sabidi, nec possum dicere quare;
> Hoc tantum possum dicere, non amo te."

I do not like the mercury, and cannot speak from experience of its efficacy in cardiac dropsy.

There comes a time in the treatment of this complaint when not only diuretics in all forms, but even purgatives, cease to remove or even to keep in check the anasarca. And this brings me to speak of another mode of treatment, which often proves palliative for a time—viz., puncturing the lower extremities, and thereby draining off the fluid.

This is not a new mode of treating the disease, though it has at various times fallen into unmerited neglect, and perhaps at the present time more so than at any other. Freind, in his "Historia Medicinæ," refers to the passage in Ætius which treats of this method of curing dropsy. Ætius is quoting from Asclepiades, and says that "an in-

cision is to be made in the internal part of the leg, about four fingers' breadth above the ankle, and that it is to be of the same depth as in venesection. A small quantity of blood flows first, and then there is a continuous discharge of water; and, without inflammation, the wound remains open until the whole dropsy has run off, no internal medicine being used." Freind continues, "Ipsa operatio ab Hippocrate memoratur, et ab ejus temporibus usque ad hunc diem multo sæpe cum successu adhibita est. Aliam puncturæ, scilicet per acum, viam proponit Sylvius de la Boe, hanc a se primo excogitatum glorians; quanquam evidens sit ea omnia ex hac descriptione desumpta esse, atque totidem verbis ab Avicenna expressa." And then he adds, "Verum haud sola hæc inventio recens dicitur, quam antiqui nobis medicinæ scriptores diserte tradiderint. Id autem omnibus in chirurgia vel minimum versatis constat, lanceolam longe præferendam esse cuivis acui, in aperiendis iis, quæ anasarcam comitantur tumoribus."—("Historia Medicinæ," p. 385: Lond., 1733.) Mead commences his notice of the treatment of dropsy ("Monita," p. 130: Lond., 1771) with an account of this operation. He directs an incision to be made two fingers' breadth above the ankle down to the cellular membrane, and no further; and he orders the leg to be fomented with a decoction of emollient herbs, to which some spirits of wine and camphor have been added. He tells us that he has often found this mode of treatment, not only in this disease (anasarca), but also in ascites, of great service, and sometimes curative, the water running out for many days to an extent to exceed all belief. He carefully cautions us to support the patient's strength under a serous discharge from this or any other wound. He then gives a case, apparently hopeless, of anasarca, combined with ascites, where, by a wound made in this manner in each leg, followed by a combination of bitters, squills, and such purgatives as elaterium, calomel and jalap, the patient recovered, and died five years afterwards of another disease.

This method of treatment is also brought under our notice by Heberden, in his "Commentaries," but not with so flattering hopes of advantage. He says, "When these and other diuretics have failed, as is often the case, some have attempted to draw off the water by incisions in the

legs, and even by cantharides blisters applied to them; and sometimes blisters take place spontaneously on the legs of dropsical persons. By these means," he continues, "I have seen not a small quantity of water drawn off, but never the disease cured ('morbum autem nunquam sanatum'); but they gave a brief respite, and eased the patient a little." He then notices the great objection to this mode of treatment—the difficulty of healing, and the danger of these wounds—"Odiosum est quod hæc vulnuscula interdum fiunt ulcera sanatu difficilia, vel periculosa, quanquam bis aut ter quotidie pannis laneis ex aqua calida expressis foveantur. Fomenta hæc utilia sunt ad aquam copiosius evocandam."—(Commentarii," p. 191: Londini, 1807.)

I have here quoted the opinions of these very practical men as a test, so far, of the value of the treatment by incisions and puncture. I have no hesitation in saying with both Mead and Heberden, that I have not only often seen it of great benefit to a patient laboring under anasarca, no matter what the pathological cause of that disease, but have also in some cases seen it prove a cure, or, at any rate, that, after recourse had to it, internal medicines, which previously exerted no effect on the dropsical effusion, began to act, and the anasarca did not reappear.

I do not, however, recommend it until all internal remedies have failed. I never have recourse to it till it has become, to use Mead's expression, "unica spes salutis;" and I do not forget the qualification he makes, "et ea dubia." Still I am decidedly of opinion that, whether as a palliative or as a hope of cure, it deserves more notice than now-a-days it seems to me to get.

There are two modes, as stated above, in which the opening for draining off the fluid may be made—either à puncture with the lancet, or with a good stout sewing needle. From a single puncture by the latter, a quantity of water will sometimes run out so as to pass through the bed in a few hours, and require to be collected in vessels placed below it.

Heberden has evidently seen the danger attending this mode of treatment, though he does not say specifically in what it lies. He tells that the wounds are difficult to be healed, but that we need not fear. He also says they are "periculosa." Now, the danger consists in the inflamma-

tion of an erysipelatous character, that not unfrequently takes place, extending up the limb, sometimes bringing on *sphacelation*, and for the most part ending in the death of the patient. But if the medical attendant would be satisfied with one incision, and one, or at the most two, punctures, in the proper place, erysipelas is not so apt to occur. The state of the skin—its low vitality during the existence of the dropsy under it—is singularly favorable for this form of inflammation; but a small clean cut, or one or two punctures—and, if there be two, at a distance of not less than two inches from each other—is not so likely to be followed by this as when, in the anxiety to get the water all off speedily, several have been made. The writers whom I have quoted all recommend fomentations to be applied to the wound; but I have often found the evaporating lotion very successful in keeping down any disposition in the part to erysipelas. Frequent ablution, also, with tepid water, and the removal of any cloths that may be soaked with the serum that has run out, will serve to prevent, so far, any irritation from being set up in the skin.

When the operation, even with the needle, has to be often repeated, as is sometimes the case, for the ease of the patient, especially in cardiac dropsy, there is sometimes a degree of inflammatory action set up in the cellular tissue by which its interstices become obliterated, and the skin and it become quite closely adherent to the facia below. I remember this occurring in a gentleman, who had been kept alive for some months by punctures, and who was at last dropsical everywhere, except below the knees, where the adherent and thickened integuments would not distend—thus giving him, however, not a little pain. It has of late been recommended to have recourse to this treatment much earlier in the disease than was the custom with the old practitioners; and it has been said that the chances of success from it are much greater than when the patient's strength has been exhausted, and the vitality of the skin has been impaired by the long existence of a dropsical effusion. This reasoning is fair; but, whilst admitting it, one practical point may be mentioned, which is, that the fluid does not flow so freely from the incisions as when the areolar tissue has become more open and less resilient by the long existent pressure of

the effused serum. And, little as the danger of erysipelatous attacks may be from puncture of the skin in the early stage of anasarca, still there are few that will subject the patient to this chance of danger until all the other more usual and often successful modes of treatment have been tried in vain.

As to another topical means of treatment in this disease —viz., the application of blisters to the anasarcous legs, with the view of draining off the serum—I would have scarcely thought it necessary to speak, believing that almost none, now-a-days, would adopt this practice; but lately I met a very intelligent country practitioner, who told me that he occasionally had recourse to this application. Sydenham has condemned the practice, and branded it as a favorite application of empirics; and he states that "blisters entirely extinguish the natural heat, already almost overpowered by the water and deficiency of the animal spirits, and bring on a gangrene—too common in such cases." Sydenham's authority (and, by the way, he also condemns acupuncture) is great; but I have seen a small vesicle, which had formed on one of the lower limbs, burst and drain off the whole serum from a person affected with extensive anasarca. The case alluded to is one of interest otherwise, though more properly suited to an article on renal dropsy. The patient, a lady, had the most albuminous urine I ever examined. Every remedy for dropsy had been tried by her medical attendant but mercury, and it was only left to me to suggest that, before the patient died, this medicine, which I had never seen more dangerous in this form of dropsy, as has been asserted by writers, than in any other, should be cautiously tried. This was done. Two days afterwards the vesicle above alluded to showed itself and burst, and our patient, much to our surprise, recovered, and is still in good health—seven years after the above attack. What nature does may not always be successful in the hands of art; and the exciting of a vesication by means of a blister is much more likely to be followed by dangerous than by curative effects in all anasarcous limbs, from whatever cause the dropsical effusion may have arisen.—*American Jour. Med. Sci.*

On the Diagnosis of Tape-worm, from the character of the Nervous Symptoms induced by its presence.—M. Legendre has published an interesting memoir, upon the nervous symptoms produced by tape-worm, in the *Archives Générales de Médecine* for June, 1850. He places the facts of this department of diagnosis in a very clear point of view; and, on this account, we think it right to call the special attention of our readers to the following brief abstract of his paper. When anomalous nervous symptoms perplex the physician, it is always right to compare them with those which are known to be caused by tape-worm; and if any room for suspicion of its presence exist, it is always imperative to administer a vermifuge. We say *always*, because the experiment is at least harmless, as the perfect safety, as well as the general success of the kousso has now been fully established on unimpeachable authority. We would in all cases, prefer this medicine, or the oil of the male fern, to the bark of the root of the pomegranate, which is considered by M. Legendre to be the best. The latter is likewise, undoubtedly, a most valuable drug for dislodging the tænia; but it is not quite equal to the kousso, or the male fern. The following is the substance of M. Legendre's paper:

Thirty-three fully reported cases are carefully analyzed.

Disorders of the cerebro-spinal nervous system occurred most frequently; viz., in twenty of the thirty-three cases. They were in twelve cases, of a convulsive character, occurring several times, or oftener (being eight times epileptiform, and four times hysterical). In eight of the cases the convulsive movements were partial, being confined to the face, or to a single limb. In fourteen of the thirty-three cases, the convulsions were succeeded by vertigo and cephalalgia.

Swooning, complete or incomplete, was noted in about a fifth of the cases; viz., seven times.

Disturbed vision was noted in six of the thirty-three cases. This consisted in double vision or in the presence of flocculi, of *muscæ volitantes*, and of luminous flashes. One patient is mentioned as having had periodical blindness.

Buzzing in the ears is only mentioned as having occurred in three of the cases.

A pricking or gnawing sensation at the epigastrium existed in fourteen of the thirty-three patients. The symptoms now enumerated rarely existed singly in one patient, and two or three of them were generally present in the same individual.

Whenever one or more of the above symptoms are observed and no other explanation can be given, an investigation should be made to determine whether they may not depend upon tape-worm. If the physician discover that the patient have a gnawing at the stomach, capricious, or insatiable appetite, abdominal pain, a feeling of general prostration, or itching at the entrance of the nostrils or anus, there can be little doubt of the presence of the parasite. M. Legendre believes that the best time for giving vermifuge is when the symptoms are most urgent, or when some parts have been spontaneously voided. He says that Wawruch, of Vienna, in an analysis of two hundred and six cases, attributes such occurrences to lunar influence; asserting that they occur most frequently at the full moon, or during its decline, and that it is, likewise, at these times that the patient suffers from an exacerbation of the symptoms. It was not till M. Legendre had finished his researches that he became acquainted with the analysis of M. Wawruch's paper, published several years ago, and which, from its value, we subjoin.—*London Journ. Med.* Nov. 1850.

Wawruch on the Causes and Symptoms of Tape-worm.—The following is an extract from an abstract, contained in the *Gazette Médicale* for 2d October, 1841, of a paper published by Professor Wawruch in the *Medicinische Jahrbucher der Œsterreichischen Staaten*:

During the period of twenty years, Dr. Wawruch treated 206 persons affected with tænia; 71 men, and 135 women. The oldest person was aged fifty-four; the youngest, three and a half years. Twenty-two were under fifteen years of age; and among these were six girls who had not menstruated. Most of the patients were

from fifteen to forty years old. The patients belonged to the middle and lower classes; they nearly all inhabited the district lying along the Danube, or lived in low and damp dwellings. They followed very different occupations, and their mode of life was various. It is remarkable that the same conditions which give rise to scurvy in Vienna also produce tape-worm. The articles of food which seemed chiefly to engender tape-worm were bad bread, meals of milk, butter, cheese, potatoes, pork and mutton, and bad water. The diseases which preceded the formation of tænia were gastric and cutaneous affections, but especially gastric and intermittent fevers. There were observed forty-three cases of intermittent fever, twenty of gastric fever, sixteen of typhoid fever, ten of ringworm and herpes, forty-two of itch, eight of scarlatina, thirteen of measles, and two of chronic urticaria. Scurvy, syphilis, chlorosis, and other diseases which affect digestion, were also observed to precede tænia; but, in general, few of the individuals affected with tape-worm had not had lumbrici when young. The influence of hereditary predisposition is very doubtful. Dr. Wawruch only saw two instances; in one, a mother and daughter, in another, a father and son had tænia. Irregularity of the menstrual function seemed common; thus, thirteen females had only menstruated at the age of 16 years, twelve at 17, nine at 18, seven at 19, and one at 20. The duration of the disease was from a few months to ten, twelve, fifteen, twenty, twenty-five, and, in one case, even to thirty-five years. Of the 206 patients, three only, who were foreigners, had *bothriocephalus;* the others had *tænia solium.*

Symptoms.—The symptoms of tænia are very various; the following are stated by Dr. Wawruch to be the most constant:

1. Dull pain in the frontal region, vertigo, noises in the ears; and, in some a kind of idiosyncrasy for music.

2. Eyes dull, surrounded by a blue ring; œdema of the upper eyelid; pupils dilated; frequent involuntary action of the muscles of the eye; various aberrations of sight, as amblyopia, diplopia, or muscæ volitantes. One patient complained of a periodical blindness during the day.

3. Frequent change in the color of the face; lips lead-

colored; a peculiar look about the mouth and nose; the appearance of general cachexia is not constant, for the patients often preserve a flourishing aspect for some time: many of them say they have become thinner.

4. Anorexia, alternating with such a voracious appetite that the patients faint if they are not supplied quickly enough with food; desire for certain articles, as carrots, milk, wine, bread, etc.

5. Feted breath, clayey taste, loaded tongue, salivation, nausea, and even vomiting of liquid, as clear as water, in the morning.

6. Itching of the nose and anus, and the vagina in females; grinding of the teeth, especially during sleep; accumulation of a clear fluid in the mouth; transient heat, langor, palpitation. The sensation of a cold hand pressing on the heart (considered as a pathognomic symptom by Reinlein) has never been observed.

7. Abdomen tumefied; borborygmi; a sensation of suction, constriction, and pricking, around the umbilicus, and undulatory movements, as of a foreign body in the intestines—especially in the morning; cessation of these symptoms after taking farinacious food hot bread, or *café au lait;* frequently diarrhea, alternating with constipation.

8. When the disease has continued for some time, and the patients are of an irritable temperament, there often arise a train of nervous symptoms, as melancholia, syncope, aberrations of the senses, disturbed sleep, frightful dreams, partial and general convulsions chorea, epilepsy, aphonia, and loss of speech.

9. The most certain pathognomonic symptom is the evacuation of one or more portions of tape-worm, either spontaneously, or after certain severe illnesses—as scarlatina, typhoid fever, pneumonia, etc.; or after the use of certain articles of food, as garlic, horseradish, cucumber, etc.; or after the administration of anthelmintic medicines. The portions are sometimes evacuated at indeterminate periods, but generally at new moon, or at the decrease of the moon; and at these times, also, the other symptoms are increased in severity.—*Lond. Jour. Med.*, Nov. 1850.

Gonorrhœa treated with Acetate of Potash.—Mr. Hilton has endeavored to arrest gonorrhœa without the aid of cubebs, copaiba, or other means usually adopted. The medicine he employs is acetate of potash in half-drachm doses. The following cases are selected to exhibit the results of this simple treatment:—

The first case refers to a man, aged thirty, a tailor by trade, who, when admitted, July 24th, into Samaritan ward, had been affected with a discharge for a week; the urine was very acid, and the scalding intense. The day after admission, Mr. Hilton prescribed half-drachm doses of acetate of potash to be taken three times a-day. Five days afterwards, the scalding was relieved, the urine being still acid; on the thirteenth day the scalding, though decreased in intensity, continued, and the urine remained acid; the acetate was therefore ordered to be taken every fourth hour. On the sixteenth day the scalding was trifling, and the urine acid; on the eighteenth the urine became alkaline; the scalding had disappeared, and the discharge had completely ceased for some days. The patients are always kept in the house a little time after its cessation, for fear of a relapse; and on the twenty-third day the patient was quite well, after having taken the acetate of potash three times a-day for thirteen days, and every four hours for five days.

The second case is that of a laborer, twenty-seven years of age; he had had a gonorrhœal discharge for three weeks when he applied for admission. The treatment began in the same ward (Samaratan), on the 24th of July, as in the preceding case, and the acetate of potash, in an aqueous menstruum, was likewise ordered to be taken three times a-day. The salt is also given with advantage in camphor mixture, and Mr. Hilton often supplies the patients with the acetate in powder, desiring them to dissolve it in water themselves. Here, however, no very material improvement took place for the first fifteen days, when the scalding became less, and the discharge began to diminish in quantity, the urine being acid. Mr. Hilton now ordered the same doses to be taken every fourth hour. On the nineteenth day the scalding continued, the discharge was less, and the urine slightly alkaline. On the twenty-second the urine became again

acid, though the patient was taking the acetate every fourth hour. At this time darrhœa set in, and the patient was precluded from continuing the acetate of potash. On the twenty-eighth day after admission, however, the use of the salt was resumed; it was taken every four hours for eleven days, when the scalding and discharge were entirely subdued. It should, however, be noticed, that even at this period the urine remained somewhat acid.

Mr. Hilton was led to give the acetate of potash a trial in cases of gonorrhœa from the following considerations: The urethra is in this disease in a highly inflammatory state, and the urine very acid; it is clear that the latter fluid in passing over an inflamed surface must tend to irritate it much, and retard the diminution of the inflammation. The acetate of potash, by its tendency to render the urine alkaline, will therefore remove one of the obstacles which lie in the way of the cure. This same salt has likewise most undoubted depurating properties, and its antiphlogistic powers are very remarkable. Its administration, therefore, will have the double advantage of rendering the urine less acid and irritating, and of reducing inflammatory action all through the system, and as a consequence in the urethral mucous membrane.

Mr. Hilton does not deny the modifying properties of copaiba and cubebs, but he considers that the acetate of potash renders great service in those numerons cases where, from many different circumstances, neither copaiba nor cnbebs can be taken. He often uses the latter therapeutical agents when the disease has been subdued by the above-named salt; a few doses of copaiba then complete the cure, and are likely to prevent relapse.—*Lancet*, Nov. 1.

The Anthelmintic—Banksia Abyssinica or Kousso.—Mr. Vaughn, Port and Civil Surgeon at Aden, Arabia Felix, in a letter to the editor of the London Lancet, on the character of Kousso, says:

Sir—In the Lancet of September, I observe a most interesting report of the cases treated by "Kousso," from

a clinical lecture delivered by Dr. Budd, on the 31st of May, in King's College Hospital; and as it appears to be a medicine but recently introduced into Europe, and to be hardly attainable there at times, save at a most exorbitant price, I take the liberty of addressing to you the following brief notice of the plant, a sample of which I hope to be able to forward to Dr. Budd, at King's College Hospital, by the next mail, *viá* Southampton.

In the report above alluded to, I observe that the "Kousso" is called the "Brayera Anthelmintica," from Dr. Brayer, who first introduced the use of the plant, or rather made its virtue known in Europe. On referring to Bruce's Travels, vol. vii. Appendix, a minute and accurate description of the medicine is found, as also an engraving of the plant in the volume of Plates. That great and much calumniated traveler calls it, in the testimony of esteem for a friend, "Banksia Abyssinica;" and I submit, with all deference, that as James Bruce was the first traveler who brought the plant into notice, the name given by him ought to be retained.

In the appendix to the second volume of the "Highlands of Ethiopia," by the late lamented Sir W. C. Harris, the following mention is made of the 'Cossoo," by Dr. Kirk, who was a member of the embassy:—

" 'Hagenia Abyssinica' (Cossoo') affords, in a cold infusion of the dried flowers and capsules, the famous drasticum purgans and anthelminticum of the Abyssinians. The tree is one of the most picturesque in appearance."—vol. ii. p. 414.

In Southern Arabia, on the sea cost, and along the shores of the Red Sea, it is well known, and considered a most valuable medicine. In the Northern and Southern Abyssinia it is universally used about once a month, the trees being numerous, and the medicine costing hardly anything. At Hurrur, a province bordering on the kingdom of Shoa, it is well known, and used; though the Somali tribes, residing to the eastward, on the N.E. horn of Africa, are unacquainted with its virtuas. Bruce mentions that no Abyssinian will travel without it; and I am informed by my friend Lieutenant Crutterden, Assistant Political Agent at Aden, that such is actually the case, to his knowledge: the few Abyssinians who visit the port of Aden invariably bring with them a supply. The dose

I understand to be a small handful of the flowers mixed with water, in which sometimes tamarinds are infused, the patient, whilst under its effects, keeping far aloof from every one. Its operation is speedy and most effectual.

In a country like Abyssinia, where almost all, if not the entire population are more or less affected with tape-worm, the "Koussso" is a special blessing of Providence, as a medicine within the reach of the poorest shepherd, and infallible in its effects.

On the Influence of Large Doses of Quinine in Neuralgia. By Charles Hogg, Esq., M.R.C.S., &c., Finsbury.—It is just possible that some of your numerous readers may not be aware of the influence of large doses of quinine in neuralgia. If you think the following worthy of a corner in your valuable periodical, it is at your service.

A case of neuralgia of a very aggravated character occurred in my own famly in the present year, and which yielded, in a most marked manner, to large doses of quinine. My experience leads me to conclude, that in doses of ten grains and upwards, this valuable medicine acts as sedative to the vascular, but highly excitant to the nervous system, as will be seen in the progress of the case. I may here add, that in numerous cases of ague I have found large doses of quinine arrest the progress of that distressing disease. My plan has generally been, to clear out the alimentary canal, by giving two or three grains of calomel, five to eight of compound extract of colocynth, followed by a saline draught; and during the interval of the cold stage, to give the following draught every six hours:—Sulphate of quinine, ten grs.; dilute sulphuric acid, ten minims; distilled water, one ounce: mix: I have seldom had occasion to give more than two doses.

Neuralgia.—My patient is twenty-five years of age, and had been for some time back complaining of debility, owing in my opinion, to her suckling and want of rest. She caught a severe cold about Christmas last, which

terminated in a violent attack of toothache, resisting every measure I could think of. A few hours' remission followed the extraction of the dens sapientia and free scarification of the gums. The pain now assumed a different character, and was marked by a violent, stabbing, plunging pain, beginning at the left angle of the under jaw, running along the ramus, and upwards in the course of the facial nerve; at other times the pain would be fixed behind the ear, again in the temple, &c., and increased (and even brought on) by the slightest touch of the skin or current of air. An attack would sometimes come on like an electric shock, preceded occasionally by a peculiar twitching of the muscles of the affected side of the face. The loss of sleep and the violence of the pain had disordered the secretions generally. The digestive functions were restored by a pill, composed of two grains of blue-pill, and five of compound extract of colocynth; and a draught, composed of extract of taraxacum, sulphate of magnesia, and tincture of ginger, continued for a few days. I endeavored to procure sleep by Dover's powder, acetate of morphia, hyoscyamus, &c., but without success. A slight mitigation of the symptoms were produced by a draught, ordered by my friend Mr. Gay, composed of sulphate of iron, two grains; muriate of morphia, one-sixth of a grain; extract of Canabis Indica, one-twelfth of a grain; it could not be continued, as it seemed to disagree with the child. I had before this prescribed carbonate, sulphate, and citrate of iron, but without avail. I then determined to try the quinine in large doses. She took a draught as follows:—Quinine, ten grains; dilute sulphuric acid, ten minims; distilled water, one ounce. This was followed by distinct remission of the pain, but left a high degree of erethism, a distressing irritability of the acoustic and optic nerve of the affected side, with slight vertigo. Before proceeding further, I obtained the sanction of my friend Dr. Elliotson, who advised the medicine to be continued every sixth hour,—the first dose, ten grains; the next, twelve; and the third, fifteen. After the third dose—that is, the twelve grains, as she had taken two of ten grains—she was completely deaf, particularly on the left side, but had no return of the pain. Generous diet completed the cure. During

the last month there has been a slight tendency to a return, which, however, has invariably yielded to two draughts of five grains each. No argument would induce my patient to give up nursing.—*London Lancet.*

On a Death from Heart-disease occurring in a swimming bath. By Wm. James Jones, Esq., M.R.C.S., London.—Having for many years taken great interest in the art of swimming, and having also, as chairman of a long-established swimming club, had great opportunities of observing the effects produced upon the system by the healthful habit of tepid bathing, I am induced to forward you the results of an autopsy on the body of a gentleman, who, without apparent previous illness, died suddenly whilst bathing in the Holborn baths. I consider that by so doing I shall remove, in some measure, the prejudice connected with this most useful and necessary art, and at the same time offer an explanation of the very many sudden deaths occurring to able swimmers in the water, wherein the loss of life has been erroneously attribnted to cramp, exhaustion, &c., when, in reality, sudden death would have occurred, and does occur, under other circumstances, where any great muscular exertion is used by patients laboring under organic disease of the heart, lungs, or brain, more particularly of the heart.

On the 28th of last August I was hastily summoned to the Holborn baths, the messenger informing me that a gentleman was drowned there. On reaching the patient, I found a young man, about twenty years of age, in a warm bath, and whilst endeavoring to glean some particulars of the accident, I made use of the usual method adopted for the resuscitation of the drowned. These means were put in force for half an hour, during which period I felt convinced, from the testimony of the bystanders, that the sufferer could not have been submerged more than half a minute. That such an accident should occur to an able swimmer I thought improbable, and conceiving that death was produced from asphyxia, from cerebral congestion, through partial intoxication, or a full stomach, I opened the jugular vein, from which flowed a small quantity of black blood. All subsequent attempts

to restore by artificial respiration, friction, &c., proving fruitless, the deceased was, on the following day, examined by me, under an order from Mr. H. M. Wakley, the deputy-coroner for Middlesex.

I may observe that the deceased plunged into the water from a height of four feet, that he dived about twelve yards, that he subsequently swam twenty, and then was seen to sink like a stone to the bottom of the bath.

Autopsy.—The body externally presented nothing peculiar; was tolerably fat, well-formed, with the neck somewhat shorter than usual. There was a band of tape round the left leg, which was said to have been applied by the deceased in consequence of a varicose vein having bled sometime previously. There was cataract of the right eye, which I subsequently learned was congenital. The pupil of the left eye not much dilated, and the face of a purplish color. On opening the chest and abdomen, I was struck by the unusually distended state of the stomach and flatus, which pressed with great force against the diaphragm, and must materially have prevented its descent in inspiration. It at the same time contained a large quantity of half-digested food, and *no water;* it was healthy. The lungs were healthy, and not at all congested; that of the left side was attached to the costal pleura by very many strong adhesions; they contained no water, and the trachea, bronchi, and air-cells held but very little frothy mucus. The pericardium was firmly attached to the heart by a succession of adhesions as to present what the older pathologists considered a congenital absence of this bag, the pericardial cavity being completely obliterated, and the membrane itself so adherent as to be removed with difficulty without a scalpel. The heart was tightly bound down by its covering, both its cavities being full of black unoxygenated blood in a liquid state; the right auricle was greatly dilated, so as to represent a perfect aneurism of that organ. The brain was healthy, and did not present any congested condition, except in the meningeal veins; there was some fluid in the lateral ventricles, but not much.

With these appearances there could be no question as to the cause of death, in the absence of the usual signs of suffocation; and the case is remarkable, inasmuch as

it shows the possibility of the existence of very extensive lesions, both of the heart and its coverings, without the suspicion of any disease at all existing in the minds either of patient or friends during life. Such an attachment of the pericardium to the heart could be but the result of frequent attacks of pericarditis, and it would appear, from the testimony of deceased's father, that his son had on one occasion only complained of slight pain in the chest, which did not prevent him from following his usual avocation, and that, in fact, he never had a day's illness in his life. I may observe that his father had been educated for the medical profession, and was a very intelligent, well-informed man.

A gentleman who saw him before he bathed, and who was both a barrister and surgeon, noticed the peculiar color of his face, which he compared to that of blotting-paper.

The beautiful attempt of Nature to make up for the restricted condition of the heart, by a dilatation of the right auricle, may, perhaps, explain the slight inconvenience felt from so extraordinary a state of its bag; and in a medico-legal point of view, various interesting questions might be suggested under such peculiar circumstances.—*Ibid.*

Citrate of Caffeine in Hemicrania.—Dr. Hannon advocates very strenuously the use of the above salt in hemicrania. We find in the *Presse Médicale*, of Brussels, two long articles on the subject, with some cases and a good description of the caffeine and its preparation. It is to be given in doses, varying from 5 grains to 1 drachm; and the author has added formulæ for administering the citrate in the shape of pills, draught, syrup, lozenges, &c.—*Ibid.*

Success of the Kousso in the expulsion of Tape Worm.

To the Editor of the Lancet.

SIR—I have much pleasure in forwarding for the Lancet the particulars of a successful trial of the kousso.

Mr. B——, residing in Cheapside, a delicate looking

young man, had been troubled with tænia for some years, and had taken the usual remedy, turpentine, with partial success, having at times seen parts of the worm only. I obtained a bottle of kousso from my druggist, which my patient took on Sunday morning, the 15th; after waiting two hours, with the aid of Seidlitz powder, the monster was expelled, *tête et col* complete, measuring twenty-one feet. I need not add that my patient was highly delighted at the good effects of the kousso, and has presented me with the largest specimen of a tape worm I have ever seen.

I am, Sir, your obedient servant,

THOMAS SMITH.

Anatomical Lucubrations at the Cape of Good Hope.—A writer in the African Journal, a periodical published at Cape Town, after quoting at full length a humorous extract from a recent number of the Lancet, in which a race of "men with tails" were *said* to have been discovered in Central Africa, reasons on the subject in such a guise that it is difficulty to discover whether he is in jest or in earnest. He says:

"The public do not know, as medical men and anatomists do, that every man and woman is born with and has a tail, composed of the five, six, or seven, fixed false vertebræ of the sacrum, and of the two, three, four, or five loose ones of the coccyx at its end, (in different individuals,) all of which, however, *in common men and women*, are covered by flesh and skin, and hidden;—so that it is *not at all impossible* that there may be a variety of men, even in Central Africa, forming a tribe, who all have a few more supplementary external joints to the os coccygis than are usual; in which case they would project, necessarily, beyond the skin, and form a pendulous and exterior tail; either short, as in the Manx cats, in rabbits, hares, or deer, or longer, as horses, dogs, monkeys, etc.; for *when once one child with this variety happened to have been born*, we know that the deformity would be perpetuated in a race like all the other varieties of men, as black, or colored, etc., or as in families with six toes, or six fingers, or two toes uni-

ted, or fingers, or toes webbed;—or, as among swine in the solid-footed pigs of South America, &c."—He also copies a paragraph from another number of our journal, in which an improvement upon the foregoing configuration was instanced—an eye being implanted at the end of the tail. The learned writer thinks that one at the end of the forefinger would be better—at any rate for midwifery practitioners. He adds, however, "It will be a long time, *we fear*, before mothers know beforehand which of their sons will be surgeons and M.D.'s, and that, by strong imagination, these sons will in consequence be born with eyes in their fingers. . . . After all, (he avers,) the two stories have a good moral, even if not true; *but it is certainly fully within the bounds of rational probability*, that both are true." The force of faith could certainly no further go!

Practical illustrations of the Remedial Efficacy of a very low or Anæsthetic Temperature.—1. In Cancer. By James Arnott, M. D., Physician to the Brighton Dispensary.—Having already given an account of the antiphlogistic and anodyne properties of a very low or benumbing temperature in the treatment of erysipelas, headache, and other cutaneous and neuralgic affections, as well as of its utility as an anæsthetic, in many surgical operations, in lieu of the inhalation of ether or chloroform, I proceed, on the present occasion, to lay before the profession some details respecting other important applications of the same valuable therapeutical agent. I shall show, in the first place, by a report of a case of cancer treated by an anæsthetic temperature or congelation, that it furnishes us with a perfect means of relieving the pain of that dreadful disease, without producing the stupefaction and disturbance of the system that attends the use of narcotics; and that, instead of precipitating the unfortunate patient's fate, like these, congelation, by arresting the accompanying inflammation, and perhaps destroying the vitality of the "cancer cell," is not only calculated to prolong life for a great period, but may, not improbably, in the early stage of the disease, exert a curative action.

If it be objected that the case to be reported is insufficient evidence of this property of congelation, I would reply, that the unequivocal, immediate, and long-enduring relief from suffering which it shows to have been effected by each of numerous applications, during a period of eight months, together with the restoration of the patient's general health, in consequence of the arrest of the local disease, leave no doubt on this point, and render a single case hardly less satisfactory than a multitude would be. Nay, one such application of the remedy as has been recently made in the Middlesex Hospital, by which long-continued and severe pain was immediately and completely relieved, for a period of fourteen days, (which period had elapsed without any recurrence of pain when I last saw the patient,) would almost be sufficient evidence; corroborated, as such a fact is, by the equally striking effects of the same remedy in other painful diseases.

As the subject will probably, be entirely new to many readers of this paper, it may be proper to give a brief account of the agent whose effects in cancer it is its purpose to describe. The very low or anæsthetic temperature that is used remedially as a local application to inflamed or painful parts, is produced by what are termed frigorific mixtures, or combinations of pounded ice and various salts, which, in dissolving, reduce the temperature below the degree of zero of Fahrenheit's thermometer, or more than thirty degrees lower than any temperature hitherto employed in medicine. The application of such a mixture to the skin, or mucous membrane, causes little sensation of any kind, as the part soon becomes benumbed, and the slight tingling or smarting produced (which is seldom so great as to be complained of by the patient,) is more allied to the sensation of heat than of cold. If the frigorific differs from cold water or ice in the sensations it produces, it differs from them still more in its physiological and remedial effects. There is in fact, no greater resemblance between the effects of different low degrees than there is between different high degrees of temperature;—as, for example, between the soothing heat of fomentations, and the scalding heat that is occasionally resorted to as a powerful stimulant, or the still

higher degree which, when communicated by an iron, is often used as an escharotic.

In investigating the pretensions of a new remedy, we require evidence, not only of its power of palliation or cure, but of its general safety. Large and repeated doses of opium or morphia, or copious bleedings unquestionably alleviate the pain from cancer, but it is well known from their effects in this, as well as in other diseases, that they as certainly prove injurious to the patient's constitution, or shorten his life. Now, there is no deficiency of evidence respecting the safety of the remedy which I have to propose as their substitute. Congelation has already been employed, thousands of times, in other inflammatory and painful diseases, without the slightest injury on any one occasion. The prejudice against this remedy on account of its having hitherto been only known in its uncontrolled agency, or as a cause of disease, was not extraordinary, as a similar prejudice has existed against many other powerful agents, which, before they were employed medicinally, had only been known as noxious to the animal economy. Dr. Paris adverts, in severe terms, to this prejudice in his account of the opposition from it to the medical use of prussic acid, saying that it would be just as reasonable to object to the nse of the knife in surgery because when uncontrolled and unguided by the head and hand of the operator, it is capable of doing deadly injury. To condemn medical congelation because the vitality of exposed parts of the body has been lost by long exposure to severe cold, would be as absurd as to condemn medical electricity because persons have been killed by lightning. Nor is another theoretical objection better founded, that reaction must be the consequence of minor degrees of congelation. Instead of reaction following remedial congelation, there is the very opposite condition, insomuch that parts cut in operations after anæsthesia and congelation have been produced by a low temperature, have invariably healed more quickly than under ordinary circumstances. The vessels of the part appear to be rendered incapable, for a long period, of assuming such a degree of morbid excitement as would materially interfere with the healing process.

I cannot perhaps, more forcibly illustrate the safety

with which congelation may be used in medicine, than by stating that, very lately, two young ladies, resident in London, were, after having been for some time under my care, themselves employing it—one, every other day, for suppressing the nascent pustules of an acnoid eruption on the face; the other to remove a nævus from the same locality. Were there any danger of the skin receiving the slightest blemish from regulated congelation, I should not thus have left its application to so conspicuous a part in their own hands.

But after the removal of the prejudices and misunderstandings just adverted to, another question is sure to occur to the practitioner: granting the utility and safety of this new antiphlogistic and anodyne remedy, what advantage does it possess over the numerous expedients for the removal of inflammation and pain which we already possess, that will compensate for the trouble of applying it, and of learning to apply it properly?

In the first place, it will cure diseases and relieve pains that cannot be cured or relieved by any other known means; and where the same effect may be produced by other means, it is not produced so rapidly. Both as an antiphlogistic and as an anodyne, congelation is much more powerful as respects many diseases than any agent, or combination of agents, possessing similar qualities hitherto employed in their treatment, and which, on that account, have often proved ineffectual. A very low temperature will arrest every inflammation which is near enough to the surface to be accessible to its influence, and totally and permanently remove irritation from the nerves which it can reach.

In the second place, congelation is a safer remedy than most of those which are usually employed for the same purpose. Bleeding often impairs or prostrates the reparative powers; both antimony and mercury occasionally act as poisons; opium stupifies and excites; and events have shown that, as anæsthetics in surgical operations, ether and chloroform are not altogether without danger. Not once, in upwards of two thousand applications which have now been made of it, has congelation caused the least injury.

Other advantages of congelation might be mentioned, but these of its greater certainty, promptitude and safe-

ty, must suffice. Cases are every day happening where life is endangered or lost by inflammation that cannot be subdued by bleeding or the ordinary measures without incurring greater hazard from the debility which they occasion, or other injurious effects; and cases of suffering, to which, from some constitutional peculiarity, the ordinary anodynes are inapplicable. That a great desideratum existed here, was strongly evinced by the recent deplorable case of a much lamented statesman, who died from injuries causing inflammation and intense pain. The medical art has never appeared to greater disadvantage than on that melancholy occasion. The inefficient measures resorted to, only showed the indications which the medical attendants were anxious to fulfil, but which, it would seem, they were unwilling to attempt fulfilling by the means in common use. What appeared to be wanting were, an antiphlogistic remedy that would not debilitate, and an anodyne that would not excite.

"The most dreadful disease to which the human frame is liable, is carcinoma; and, perhaps, of all organs affected by it, uterine cancer is the most painful. This is indeed a horrible disease; the patient's sufferings are aggravated by the knowledge that her complaint is incurable, and she languishes under the double torment of excruciating agony and despair. In the treatment of no disease is the medical man's duty so distressing as that of cancer—to witness the increasing sufferings of his patient day after day—to hear at each succeeding visit the same unvarying statement of pain and misery, while he knows too well how poor and inadequate are the resources of his art—while he is sensible that his utmost power will not avail him beyond blunting, by stupefying remedies, the acuteness of bodily anguish, even if he attains that fortunate and desirable advantage—is a task that calls forth the tenderest sympathy which his nature is capable of experiencing."

This graphic description (from Dr. Ramsbotham's lectures on Midwifery,) of the sufferings from cancer of the womb, will, as being very applicable to the case about to be reported, supply the place of a minute detail of symptoms. Only the more essential points will be noticed.

M. R.—— was admitted a patient at the Brighton Dispensary, on the 25th July, 1849. She is of short stature,

thin, of sallow complexion, and about forty-two years of age. She had been lately in St. Thomas's Hospital on account of the same disease for which she now sought assistance; and had complained about eighteen months previously to her entering the hospital.

Her principal symptoms were frequent and severe paroxysms of pain, chiefly in the back and hips; a profuse and most offensive discharge, and occasional hæmorrhage from the vagina; and derangement of the digestive organs. On examination, the neck of the womb was found hard and ulcerated.

For six months the usual palliative treatment was pursued, viz: the exhibition of the preparations of opium and the application of leeches. She complained that the opium made her constantly drowsy and unfit for her occupation as a needlewoman: and the pain was, notwithstanding its use, occasionally so severe as to oblige her to rise from bed and roll on the floor of her room.

In January, I determined upon a trial of congelation, having previously made another careful examination of the uterus. The disease had by this time considerably extended; the neck of the womb was now completely destroyed, and there were several warty excrescences in the upper part of the vagina. Congelation was effected by means of a frigorific mixture of two parts of finely-pounded ice and one part of chloride of sodium, introduced through a wide speculum of gutta percha, having the lower part of its upper opening of a cup-like form; and in order that the temperature might be maintained at the requisite low degree, or below zero of Fahrenheit, the dissolved ice was continuously drawn off by a syphon of peculiar construction. This peculiarity principally consists in a large two-necked bottle being connected with, or constituting part of, the long arm of the syphon; and the purpose of it is, that a stream of water may continue to flow along this part of the syphon, and keep up the suction of its upper extremity, notwithstanding any interruption in the supply. A tube of vulcanized india-rubber forms the remaining part of the syphon, with a small glass tube where it enters the speculum, in order that the rising column of liquid may be seen and regulated by a stop-cock.

The success of this application exceeded my expecta-

tion. So soon as I had learned to apply the frigorific properly, I was able to give immediate and entire relief, and this has generally continued complete for about a week. The discharge was soon diminished, and became much less offensive, and the tendency to hemorrhage ceased. From twenty to thirty applications of the frigorific have now been made, and scarcely any other remedy has been used. No advance of the disease appears, on examination, to have taken place, and in other respects there is decided improvement. The patient is not so thin; her appetite is tolerably good; she is stronger, and able to occupy herself in the usual household affairs.

She is directed to call whenever the pain returns. The speculum is generally introduced by herself while in the supine position, and she covers her extremities with a sheet before I enter the apartment. The nates are raised, in order that the speculum may be sufficiently upright to contain enough of the frigorific, which has usually been kept applied for a period varying from a quarter to half an hour. There is a slight sensation of smarting produced for a minute or two, and the pain from the disease has generally ceased within the first five minutes. If the womb be now inspected by removing the frigorific from the speculum, the greater part of its visible surface will be found perfectly white and hard. The application is terminated by allowing about a quart of cold water to run rapidly through the speculum and syphon for the purpose of gradually restoring the natural temperature, and washing away any remaing salt.—*London Lancet.*

BIBLIOGRAPHICAL NOTICES.

Report of the Eighth General Meeting of the Sydenham Society, held at the Society's rooms, on Wednesday, May 1st, 1850. Sir James Clark, Bart. M. D., F. R. S., President of the Society, in the chair. London: C. & J. Adlard.

We have repeatedly urged upon the readers of this Journal the importance of the ancient literature of the medical profession, and we have on several occasions given illustrations of the value of that literature by extracts from it. Those who may plunge deeply into it, will find rich pearls in its quiet depths, and they will learn to place a proper estimate upon those lapidaries, who, under pretence of having found new gems, make no ordinary stir in the world, when, in truth, they have merely cut off a brilliant from its parent stock. There is a healthy, vigorous stream of common sense, a rich vein of fruitful experience, pervading the works of the old masters, that should not be slighted by any one who wishes to stand fair in what may be read in the medical profession. The hardy pearl-diver finds rich gems occasionally in the most frequented spots, and may grow rich by diligent search of neglected places. Even Cuvier, rich in the lore of the past, undertook certain anatomical investigations under the firm persuasion that he was the first in the path, until he looked into the works of Aristotle, and found that he had been completely anticipated by the acute, and universally learned Stagirite, and if Cuvier could receive instruction from Aristotle, it is not impossible but that

some of us might stumble on something useful in the works of Hippocrates and Paulus Ægineta. It is improving to look into their works, at least to find out what they knew; to see how far they advanced the healing art with their imperfect means, and how far their methods of observation and of accumulating experience may be trusted now. There is no luxuriance of merit in a flippant ignorance of their teachings.

About eight years since, a number of Medical gentlemen in England, who were imbued with a just appreciation of the value of the labors of some of the ancient cultivators of medical science, united themselves as a Society, which they properly called the Sydenham Society. Their object was not only to rescue the venerable oracles of ancient times from oblivion, but to do it in such a way as to make them accessible to the medical public. Thus far the labors of this Society have been eminently serviceable, and deserve encouragement. The object of the Sydenham Society is to "meet certain acknowledged deficiencies in existing means for diffusing medical literature, which are not likely to be supplied by the efforts of individuals." The Society's publications have been distributed among 2,543 members of the profession. Those who have been members from the beginning of the Society have now received for their seven annual subscriptions of £1 1s, twenty-three 8 vo. volumes, published in excellent style, comprising 11,000 very full pages of letter-press, and twenty-six illustrative plates. "The ordinary publishing price of the Sydenham Society's works would probably be about £16 or £17."

The literary objects of the Sydenham Society are comprised under the following heads:—I. Reprints of standard English works—such as those of Sydenham, Harvey, and Hewson. II. Miscellaneous Selections from the ancient and from the earlier modern Authors, such as "Observations on Aneurism," "Memoirs of the French

Academy of Surgery," and "Essays on Diseases peculiar to women," works which were inaccessible to the body of the profession. III. Translations of the Greek and Latin medical authors, and of works in the Arabic and other eastern tongues"—such as "seven books of Paulus Ægineta," "The genuine works of Hippocrates," and the "Treatise of Rhazes on the small pox." IV. Translations of recent Foreign Works of merit." This department of publication, by the Sydenham Society, has been more voluminous than any other, and the works are very valuable.

Another important object of the Society is the publication of "original works of merit, which might prove valuable as books of reference, but which would not otherwise be published, from the slender chance of their meeting with a remunerative sale, such as Bibliographical, alphabetical and digested indices to voluminous periodical publications. Of the great value of works of this kind, there can be no kind of doubt, and we have recently understood that the Sydenham Society has secured several valuable manuscripts of the kind referred to. The intention of the Society is to make a Medical Bibliography, which "will not be a mere dry catalogue of books; but, whilst indicating every source whence information on any branch of medical knowledge may be obtained, it will give such historical and biographical notices, as will make the work of interest and value even to those who may not use it for the ordinary purposes of bibliography. The Council have already secured the means for supplying, in a complete form, the Medical Bibliography of all countries, from the earliest period down to the revival of letters in the sixteenth century, and the entire Medical Bibliography of this country, down to the close of the last century."

Among other works in preparation are "a volume on epidemic Catarrh," "the writings of Unzer and Prochaska on the Nervous system," "a further selection from the

works of Dupuytren," "a volume to comprise the most important writing of the earlier British Physiologists," and "an edition of Hunter's Plates of the Gravid Uterus."

We earnestly wish that physicians throughout this country would encourage the enterprise of the Sydenham Society. There is not a village in the Union that does not contain physicians enough to secure the works of the Society by clubbing. They could easily enter into arrangements for the safe-keeping of the books, and for the proper use of them. And while encouraging the labors of the Sydenham Society, these physicians, far removed from access to large medical libraries, would secure the means of improving themselves in their professional knowledge and skill, and greatly benefit their patients. The cost is too ridiculously small to make an impediment to the success of the scheme. Something should be done to rouse the profession to the importance of reading sound medical literature, for that is the only method we know of for erecting a bulwark against quackery, upon which charlatanism may send its surges in vain. Whenever the entire profession devotes itself assiduously to study; when the public feels confidence in the depth and breadth of professional knowledge, and feels secure that it is up to the mark in all the requirements of science, then, and not till then, can we expect an enlarged and an abiding confidence in professional abilities. It is almost incredible to think of the hours that should be devoted to communion with the excellent minds of the past and present, that are thrown away upon frivolity, or wasted in sleep. It is shocking to think of the perfection of the means for making sluggish brains dull, and of the little care that is manifested for those adornments of the mind that will survive the tomb, and flourish in eternal youth.

We cannot but believe that if physicians were more careful in the cultivation of social intercourse with one another, there would be a greater and more commanding harmony than is often found. There is nothing more destructive of petty jealousies, ill-founded prejudices, and snarling invectives than a free and cheerful interchange of the amenities and comities of life. And there is nothing better calculated to encourage the latter, than improvement at the same fountain-heads of knowledge. There are paltry things in the profession, who do what little flourishing they exhibit, through the general ignorance that prevails, but in the midst of well directed cultivation of the intellect, they would soon stumble upon their native nothingness, and die as the fool dieth. Isaachar is an ass crouching between two burdens,—the desire to be something, and the inability to be; he is indifferent to the crib, and is hopeful of provender.

We pray the attention of the readers of these remarks to the terms of the Sydenham Society. Three or four physicians may easily unite in procuring the works published by the Society. They can agree upon the terms for the common use of the books, which may be placed in the custody of one of the subscribing club as librarian. In this way those physicians may not only do themselves, but the community in which they practice, an incalculable service.

The following works have been already published:

FOR THE FIRST YEAR, 1843–'4.

Hecker's Epidemics of the Middle Ages, one Vol. 8vo, pp. xx, 380.

Louis on Phthisis, one Vol. 8vo, pp. xxxv, 571.

Th. Sydenham Opera Omnia, one Vol. 8vo, pp. xxx, 668.

FOR THE SECOND YEAR, 1844–'5.

The Seven Books of Paulus Ægineta, Vol. I, pp. xxviii, 683.

Observations on Aneurism, one Vol. 8vo, pp. xii, 524.
Simon's Animal Chemistry, Vol. I, 8vo, pp. xx, 360, plate.

FOR THE THIRD YEAR, 1845–'6.

Simon's Animal Chemistry, Vol. II, 8vo, pp. xii, 560, two plates.
Paulus Ægineta, Vol. II, 8vo, pp. xi, 511.
Hasse's Pathology, 8vo, pp. xvi, 400.

FOR THE FOURTH YEAR, 1846–'7.

The Works of W. Hewson, in one Vol. 8vo, pp. lvi, 360, portrait and eight plates.
Dupuytren's Lectures on Diseases and Injuries of Bones, one Vol. 8vo, pp. xvi, 459.
The Works of W. Harvey, M.D., complete in one Vol. 8vo, pp. xcvi, 624.

FOR THE FIFTH YEAR, 1847–'8.

Paulus Ægineta, Vol. III, pp. viii, 653.
Feuchtersleben's Medical Psychology, pp. xx, 362.
Microscopical Researches of Schwann and Schleiden, pp. xx, 268, six plates.
Memoirs of the French Academy of Surgery, pp. x, 293.

FOR THE SIXTH YEAR, 1848–'9.

Rhazes on the Small Pox and Measles, 8vo, pp. viii, 212.
The Genuine Works of Hippocrates, translated from the Greek, Vol. I, 8vo, pp. x, 466.
The Works of Sydenham, translated from the Latin, Vol. I, 8vo, pp. cvi, 276.
Rokitansky's Pathological Anatomy, Vol. II, (the first issued), 8vo, p. 375.

FOR THE SEVENTH YEAR, 1849–'50.

The Genuine Works of Hippocrates, Vol. II, pp. 406.
Essays on the Puerperal Fever, and other Diseases peculiar to Women, 8vo, pp. 552.
The Works of Sydenham, translated from the Latin, Vol. II, pp. 396.

Notice.—New Members may still obtain the 1st, 4th, 5th, and 6th year's works; but of the 2d and 3d year's books none remain. In lieu of the third volume of *Paulus Ægineta*, new members will receive a copy of

some other work, so that on commencing with the fourth or either of the subsequent years, the series of books which they will obtain, will be complete in themselves.

The leading physicians of England are either officers or members of the Sydenham Society, and the publications are made under the advice and superintendance of the ablest minds in Great Britain. Among the officers of the society are local secretaries, through whom a large share of the business is done. The local secretary for the United States is Professor Dunglison, of Philadelphia. Through him, subscribers in this country may obtain their packages by paying him a due share of the carriage of the parcel in which the books are sent.

"Those members who wish their books to be included in any of the parcels to Local Secretaries, are requested to send in their names, with their Christian name in full, and particular address to the various Local Secretaries, who are respectfully requested to forward to the Secretary for London an accurate list of all such names with as little delay as possible."

Among the laws of the Sydenham Society are the following:

"The subscription constituting a member shall be *one guinea;* to be paid in advance on the 25th day of March, annually; for which he shall be entitled to a copy of every work published by the Society for the year for which he subscribes. Any subscriber who shall not have paid his subscription previous to the last of July of the current year, shall not be allowed the privileges of that year's subscription except on the payment of a fine of five shillings; nor shall any one be allowed to join the Society for the current year after that period except on payment of a similar fine.

"The Council shall lay before the members, at each anniversary meeting, a report of their proceedings during the past year, and also an account of the receipts

and expenditures of the Society; and shall further cause to be printed and circulated among the members an abstract of such report and accounts immediately after each anniversary meeting.

"Members shall have the privilege of proposing works for publication, and shall address their propositions to the Council.

"The works of the Society shall be handsomely printed, on a uniform plan, for members only.

25th Law.—"It shall not be competent for book-clubs to subscribe to the Society as members; but it shall be permitted to societies and institutions having *permanent* libraries, to subscribe to the Society in the name of their President, Secretary, or Librarian, or other responsible officer."

In reference to the 25th law, it is obvious that any one of the members of the book club may be chosen as the one in whose name the subscription may be made. We indulge the hope that the laudable enterprize of the Sydenham Society will command the favor and encouragement of a large portion of the medical profession in this country. B.

Researches upon the Necropolis of New Orleans, with brief allusions to its Vital Arithmetic. By Bennet Dowler, M.D., of New Orleans.

We are indebted to the courtesy of Dr. Dowler for a copy of his paper on the Necropolis of New Orleans, in advance of the regular issue of the New Orleans Medical and Surgical Journal, and the pressure of other matter upon this Journal has prevented an earlier acknowledgment of Dr. Dowler's politeness.

The investigation of the vital statistics of a community is one of the most useful and valuable employments of the medical mind, and its proper management requires mental qualifications of a high and peculiar kind. There

are so many circumstances that must necessarily be constantly before the mind, and they are often so intimately blended, and so frequently impenetrate each other, that the powers of analysis are often at fault. Yet they must be separated, each particular portion must have its due bearing, and each series or group, must be restrained within its proper boundary. Even with all the aids that governments sometimes give to the subject of vital statistics, its proper management is one of great difficulty. Even in the midst of the greatest apparent fulness of material, the mind strains after essential points of knowledge that have not yet been attained. The vital statist of one hundred years ago, would have considered himself overburdened with riches, if he had possessed the materials that are now open to the uses of vital statistics, but the statist of the present, constantly finds his subject stretching beyond his materials into the regions of obscurity.

With a full knowledge of all of the inherent difficulties of his subject Dr. Dowler determined to abandon the ordinary paths of investigation, and turned his attention from the figures of the living to the revealments of the city of the dead. It was a bold and original thought, but in the hands of Dr. Dowler it has assumed life, harmony, and strength. The voice of the tomb does not utter, altogether, an uncertain sound upon these subjects; it may speak expressively of the sanitary history of its climate, and should not be neglected, even in the use of other materials of vital statistics.

We have read the paper on the Necrology of New Orleans with a high degree of satisfaction, but it is impossible to make an intelligible abstract of its facts. The various elements of the material are so intimately interwoven that it is impossible to cut any part without disturbing the integrity of the whole. But we think Dr. Dowler amply sustains the fact that New Orleans

has a much higher reputation for sickness than it is fairly entitled to. The following remarks, forming the peroration of Dr. Dowler's article, present his well-sustained conclusions:

"The scope of this paper does not include the special investigation of the climate of New Orleans as it affects immigrants alone. Acclimation is a subject so difficult, so extensive and so important, that it cannot be disposed of in a summary manner. Accurate, popularized information on this subject, is a great desideratum, and might prevent the senseless sacrifice of hundreds of lives, which ignorant, avaricious heads of families make, almost every year, for the hope of gaining dollars. Of the vast number of destitute families who come from high northern latitudes to this city, few comparatively, intend to settle permanently, and few remain beyond the acclimating period. Hence arises a useless waste of life. The acclimated are constantly replaced by the unacclimated. Wave follows wave—epidemic, epidemic. The parent, who, for the mere chance of gain, without intending to become a permanent resident, brings his family from a cold climate to New Orleans, during the hot season, is not guiltless; nor is the writer who would conceal from the immigrant the real dangers of southern acclimation, altogether innocent. The prudent who possess means to command the physical comforts, including the timely aid of doctors and nurses, incur but little danger during an epidemic, and obtain great advantages in their subsequent immunity from epidemic fevers. Accurate knowledge of the climate, is one of the greatest means of obviating its temporary ill effects upon the immigrant, during acclimation, after which, as Shakspere saith,

> "The blessed Gods
> Purge all infection from our air, whilst you
> Do climate here."

The vital perturbations of New Orleans, in modern times, have been unexampled. Its great epidemic, causes the population to vibrate to and fro, with almost the regularity of a pendulum. This, it must be admitted,

as presumptive proof against the healthfulness of the climate for strangers.

"Many circumstances, in no way connected with the salubrity of New Orleans, combine to produce every year, an ebb and flow, in its population. The maturation and transportation of the crops of the great Valley of the Mississippi, the navigable condition of its numerous rivers, the concentration of vessels from sea, and the mildness of the climate from November to July, all conspire to attract a multitude to the city during a portion of the year, only, making New Orleans a grand caravansary, a commercial panorama, a lottery for speculation, as well as a statistical enigma, not to mention the social evils inherent to a transitional, if not a chaotic condition of society. Besides all this, the emigration of the acclimated, repress the progress and paralyzes the energies of the city, vitally, socially, and commercially. Immigration alone, keeps alive the yellow fever, which, but too often, fills the streets with hearses, and blackens the reputation of the city for salubrity.

"A French philosopher declares, that there is always something in the misfortunes of others, which doth not displease us. Without sanctioning this maxim, the people of New Orleans may, nevertheless, comfort themselves with the reflection that they live, on an average, much longer than the citizens of New York, taking the Report of the Board of Health for authority. This same authority, which pronounces London to be "twice as salubrious as New Orleans," shows that during last year, the average age at death, was, with the trifling exception of three months, equal to that of London.

"The Report shows that the mortality of New Orleans from consumption and all other pulmonary diseases is, about half as great as in Philadelphia, New York, Havana, Baltimore, and Charleston; sometimes much less, and sometimes a little more than this ratio: thus, omitting fractions, in every 100 deaths in the two cities first named, 28 die of these diseases, while in New Orleans, the proportion is only 13; and, for consumption alone, only 9; being not half as great as in Havana, where it is 19. This statement, in connection with another from the same source, showing that the average life of New Orleans is much longer than in the northern

cities, proves that the former, will compare with the latter, most favorably, as it regards salubrity and long life. This favorable comparison will become more apparent, as soon as the sociological equilibrium shall be duly established between the dynamical and statical elements of the population of New Orleans."

Dr. Dowler has performed a very acceptable service by the investigations in the Necropolis of New Orleans, of which we speak, and we hope that he will find time for the prosecution of inquiries upon the kindred themes to which he refers in the admirable paper before us. They are of the highest importance to the philosophy of medicine, and it would afford us sincere pleasure to record Dr. Dowler's triumphs over the difficulties of those subjects. B.

RETROSPECT

OF

AMERICAN MEDICAL INTELLIGENCE.

The Speculum Uteri.—The New York Journal of Medicine, for January, 1851, contains an excellent paper from the pen of Professor Gilman on the use of the speculum uteri, in the investigation of uterine diseases. It is not a little singular that such men as Drs. Lee, Ashwell, Tyler Smith, and Marshall Hall have arrayed themselves against the progress of their profession. Of the invaluable character of the speculum in the diagnosis of female diseases, none who have paid any attention to its practice can entertain any doubt, and we feel pleased with the manly stand that Dr. Gilman has taken on the subject. He sustains himself very admirably, and deserves the thanks of the profession for the clear and convincing views he has given upon the use of the speculum. The following are the closing remarks of Dr. Gilman:

"Dr. Bennett, Dr. Locock, Dr. Murphy, the hundreds, might I not say thousands of practitioners who, in Great Britain, on the continent of Europe, and this country, a part of whose daily business it is to see, and treat, *and cure* these ulcerations, are laboring under some strange hallucination, for to this we are driven—there is no room for mistake. I see a case of chronic leucorrhea; the patient is incapable of exertion, her health is broken, her spirits depressed to the lowest point, for she has been

for years under treatment—has tried tonics without number, and washes without end, and all to no effect; I use the speculum. I *think* I see the cervix large, red, and on either lip I *imagine* that I see an ulcer. Under the influence of this idea—supposing, nay, so far has the delusion gone with me, verily believing that there is an ulcer—I apply nitrate of silver; I cauterize this *supposed* ulcer. I do this again and again; my patient gradually improves in health—is convalescent—is well. She returns to her home, a happy, useful wife; and in a year or two I get a letter, full of gratitude and happiness—the long barren wife is a mother. Now is this case—and, like many others who devote special attention to diseases of the uterus, *and use the speculum*, my experience will supply many such—is this case a mere delusion? Have I dreamed that I saw this ulcer—that, after repeated cauterizations, I saw it growing less and less, till nothing but sound mucous membrane appeared? Have I dreamed all this? Must I, at the dictum of Dr. Lee, or Dr. Ashwell, or Dr. any-body-else, give up my own observation, my own experience? And why? Because they will not look, and do not see. But there are great moral considerations, and Dr. Ashwell says he should feel tempted to give up the treatment of the diseases of women altogether, if the speculum continued to be used as it has been. And shall I follow his example? shall I give up the instrument that has enabled me to restore scores of women to health and happiness, because it is indelicate? Well may Dr. Locock say that the talk about the indelicacy of the use of the speculum was all nonsense. Nonsense it is—poor, paltry, but yet mischievous, most mischievous nonsense; and, for myself, I believe that all this talk about treating the use of the speculum is little better, and most of that about its abuse is very much worse. The attempt to cast reproaches on honorable men for well-intended efforts to advance our science and improve our means of curing disease, because those attempts involve personal exposure, is much more likely to have its origin in professional jealousy than in moral principle."

Tetanus with recovery.—Dr. Lente, resident Surgeon of the New York Hospital, reports in the New York Journal of Medicine, a very interesting case of tetanus, after a compound fracture of the metacarpus. The tetanus continued for fifty-three days, and was managed with laudanum, antimonial tartar, ether, by inhalation, enemata of assafetida, tobacco cataplasms, croton oil, morphine, etc. The patient recovered, and was discharged, on the fifty-third day, cured.

Hydrocele.—Dr. Lente also reports a case of hydrocele, from the tumor of which forty-two ounces of water were drawn off in the first operation. Dr. Post has removed three quarts of fluid at one time.

Notwithstanding the size of the tumor, in Dr. Lente's case, he resorted to the injection of tinct. iodine one part, water three parts, with beneficial results.

Ascites.—Dr. T. D. Lee, of New York, reports, in the New York Journal of Medicine, a case of ascites, in which the operation of Paracentesis Abdominis was performed thirty-nine times, and one hundred and forty-one gallons of water were removed. The patient died on the 3d of July, 1850.

Dr. Davis's History of Medicine.—Our confrêre of the New York Journal of Medicine gives Dr. Davis a severe castigation for the work dignified with the title of History of Medicine. We think the profession geneally will coincide with the sentiments of the reviewer; Dr. Davis's History of Medicine is neither a work of information nor of accuracy. Instead of being a history of American Medical Institutions, it is a gross caricature of the sub-

ject. It proclaims deficiency where none exists, and assails the profession in a style that is neither truthful nor useful. The man who rises from the perusal of Dr. Davis's History, under the impression that he has read the details of American medical history, will make as great a mistake as he would in supposing he had read the history of America, in reading Paulding's History of John Bull and Brother Jonathan.

The united efforts of medical men should be directed to the elevation of professional excellence, an object not likely to be promoted by such works as the one which Dr. Davis courteously calls a "History of Medical Education and Institutions in the United States."

Chloroform an Antiseptic.—M. Augend, of Constantinople, has transmitted to the Academy of Sciences, Paris, the following experiment with chloroform:

"Take three wide-mouthed flasks, the first containing a few drops of ether, the second a few drops of chloroform, the third left empty. If in each of these a piece of beef be placed, and the flasks be closed and left undisturbed in the summer season, the following circumstances will be observed:—The meat, which was of a reddish brown color in its natural state, changed instantly to a vermilion-red in the mixture of chloroform and air, while in the ether vapor no change occurred. At the end of a week the difference was greater still; the meat in the flask containing atmospheric air was but little changed in its aspect; that in chloroform had acquired the appearance of boiled meat. On opening the flasks it was found that the meat, both in the atmospheric air and in the ether vapor, was putrefied, and emitted a most offensive odor; while that in the mixture of chloroform and air had the sweetish taste and odor of chloroform.

"M. Augend has ascertained that 1.200th of chloroform completely prevents the putrefaction of fresh meat.

The most apparent action of the chloroform is the rapidity with which it traverses the thickest tissues, and causes an immediate contraction of their parenchyma, with consequent exudation of the fluids of the structure experimented upon. The author further dwelt upon the value, in a medico-legal point of view, that chloroform thus possesses in arresting putrefaction."

Admitting the full truth of these statements, we see no special gain to the profession in the facts. We have in arsenic and corrosive sublimate all the requisites for antiseptic purposes that are needed, for no one will pretend that chloroform is superior to these agents, and they are much cheaper.

On the Use of Therapeutic Agents in relieving Rigidity of the Os and Cervix Uteri.—Dr. Archibald Hall, in the British American Medical and Physical Journal, makes the following remarks:

"Therapeutic agents are of value exactly in accordance with the effects which, under peculiar circumstances, they are capable producing. This I apprehend to be an axiom in medicine, and by which the relative value of medicinal agents may be accurately measured. I propose now to examine these several modes of treatment, keeping the above axiom in view.

"1. With regard to venesection. This seems to be the established rule of practice, and is sanctioned by every author of note. Bleeding, in its influence upon the system, is one of the most certain and powerful sedatives which we possess, and presents strong claims to our consideration, under the peculiar circumstances of the case. To be of any real value, however, it requires to be vigorously practiced, and relaxation will be found rarely to follow, until a large quantity of blood has been abstracted, and syncope is on the point of supervention. There can be no question that the best effects follow its

employment, as far at least as rigidity is concerned. But is this line of practice always expedient? Is it always imperiously demanded? When the os uteri exhibits heat, dryness, and tenderness, such effects being the evidence of existing inflammation, the propriety of the practice cannot be questioned. But before the development of these symptoms, several hours may elapse, during which the effects of irritation alone are apparent as indicated by the mere rigidity. Under these circumstances, bleeding *is not* imperiously demanded, chiefly because it entails an unnecessary withdrawal of blood, inductive of debility, and protracted recovery—thus effecting more than we desire. The practice, however, is recommended and sanctioned by Burns, Dewees, Blundell, Ramsbotham, Chailly, Cazeaux, and a host of others.

"2. The exhibition of opium is not always attended with the advantages which we might, *a priori*, be led to expect from its well known narcotic powers. If exhibited, full doses should be employed; but, as in the case of bleeding, it is liable to effect too much—it may lull the uterine contractions, and thus suspend the labor, which it is generally desirable to expedite.

"3. The local application of belladonna. This was first proposed by Chaussier, who suggested its use in the form of ointment made with cerate, reasoning analogically from the influence of this medicine upon the iris. Dubois subsequently used the extract in its undiluted state. The practice is peculiarly French, and has not been followed to any extent by either British or American accoucheurs. That the application of the belladonna will produce relaxation is admitted on all hands; but the extent of that relaxation cannot be predetermined. It may affect the whole muscular coat of the uterus, and be thus productive of alarming consequences.

"4. Tartar emetic. The prostration and muscular relaxation produced by this agent, almost naturally indicate its employment in cases of the kind we are considering. Nausea having been once established, the rigidity will in a very large majority of cases be found readily to yield. Tartar emetic seems almost to exert a special influence on the cervix, for while the contractions of the fundus and body of the uterus are not interfered with, dilatation of the cervix will be found to proceed rapid-

ly, and this the result of the reëstablishment of the reflex actions existing between the stomach and the uterus, which are apparently suspended.

"The few authors who have advocated the employment of tartar emetic in these cases, have generally prescribed it in doses of one-fourth of a grain repeated every three or four hours, until its influence became apparent by the gradual dilatation of the mouth of the uterus. There is certainly no worse system of midwifery than the meddlesome midwifery; but if, in any case, interference is demanded, whether of a manual or medicinal nature, the object should be a speedy delivery, consistent with the safety of the mother and the child. My own observation has led me to the belief that it may be safely resorted to in much larger doses, and with more prompt relief; and I cannot but view the mode of employing the medicine indicated above, as attended with a very considerable and quite unnecessary sacrifice of time on the part of the accoucheur, and of prolonged suffering on the part of the patient. I, accordingly, prescribed it in one grain doses, repeated every half hour, and I have not as yet found it necessary to exhibit the medicine in such doses more than thrice, relaxation most commonly following the exhibition of the first grain."

Professor Paul F. Eve.—This gentleman terminated his lecture term in the Louisville Medical School on Friday, the 31st January, and started for Georgia on the 1st day of February. The connexion of Professor Eve with the Louisville School has been an eminently satisfactory one, and before his departure for the South, Professor Eve received the most gratifying testimonials from all of his colleagues, the Board of Trustees of the University, and from the medical class, of the high appreciation placed upon his services. Nor was this appreciation confined to the sources named; the practicing portion of the profession in the city, entertain for Prof. Eve those sentiments of respect and esteem which are

commanded only by true merit. He has won a high position in Kentucky, and we earnestly hope he may long continue to retain it. B.

Prof. Silliman.—The friends of the Louisville Medical School will be pleased to learn that Professor Silliman is about to visit Europe, where he will remain until next Autumn. The Trustees of the University, and the colleagues of Professor Silliman have placed at his disposal means for enlarging the teaching facilities of the school, and from what we know of Professor Silliman's intentions we can safely promise a considerable addition to the already ample resources of the school. There are few persons to whom such a trust as this could be confided with an equal measure of confidence in the judiciousness of the expenditure. B.

Auvert's Plates.—Among the recent acquisitions to the surgical department of the Louisville Medical School, we have examined the great work of Auvert, Imperial Surgeon of Russia, with more than ordinary satisfaction. The plates are superior to anything we have ever seen in surgical works, and in order to secure their perfection and keep the selling price within reasonable limits, the Emperor Nicholas contributed 60,000 silver rubles towards the expense of the work. It seems to us that these plates have reached the highest perfection of art; they seem to be the very presentment of the diseased conditions they are intended to pourtray.

One half of this able work has reached this city, and we have enjoyed an unusual degree of pleasure in examining its merits. A careful study of the plates cannot fail to be of great service to students of medicine in

preparing themselves for the practice of their profession, and no one who may fix the features of these plates in his memory can ever regret the labor and time bestowed on their study.

The following is a list of the subjects delineated in these masterly engravings:

Tabula 1.—Os Frontis Meliceride perforatum.
" 2 and 3.—Calvariæ Fractura.
" 3.—Carie Syphilitica Calvariæ basis exesa.
" 4.—Dermatokeras frontis.
" 5.—Polypus sinus frontalis dextri.
" 6.—Elephantiasis dura dextræ—angiectasi integumentorum cranii vicinorum juncta.
" 7.—Elephantiasis integumentorum occipitis.
" 8 and 9.—Fungus hæmatodes oculi dextri.
" 9 and 10.—Fungus Encephaloideus oculi dextri.
" 10 and 11.—Fungus Melanodes oculi sinistri.
" 11—contains three beautiful figures, which are in the very highest style of art.
" 12 and 13.—Canceri palpebræ inferioris sinistræ.
" 14.—Angiectasis apicis nasi—beautifully executed—we speak surgically.
" 15.—Angiectasis genæ sinistræ.
" 16.—Lipoma genæ dextræ concrementis calcariis farctum.
" 17 and 18.—Osteo-sarcoma ingens maxillæ superioris sinistræ and dextræ.
" 19, 20, 21, and 22 represent the preceding cases of disease after operations for the removal of the osteo-sarcoma, and speak favorably of the surgical skill of M. Auvert.
" 23.—Osteo-sarcoma symphisi maxillæ superioris insidens.
" 24—Is an admirable Plate, showing the result of an operation in the preceding case.
" 25 and 26.—The first is a formidable case of osteo-sarcoma of the superior maxillary bone. Second—the same subject after an operation.
" 27.—Ingens tumor cysticus regionis parotidæ sinistræ.
" 28.—Steatoma regionis parotidæ dextræ.

" 29.—Lipoma labii superioris ejusque integumentorum angiectasis.
" 30.—Atresiaoris imperfecta,—a beautiful specimen.
" 31.—Cancer nasii.
" 32, 33, 34, 35, 36.—Specimens of osteo-sarcoma.
" 36, 38, 39.—Osteo-sarcoma ingens maxillæ inferioris.
" 40, 41, 42.—Cancer labii inferioris.
" 43.—Cancer condylomatosus anguli oris dextrii.
" 44.—The same subject after an operation.
" 45.—Cancer labii inferioris ex utroque angulo oris proficiscens.
" 46.—A delineation of the above case after an operation.
" 47.—Cancer labii inferioris utramque ejus commissuram afficiens.
" 48.—A Plate of the preceding case after an operation.
" 49.—Cancer ingens labii cum excidio subjacentis maxillæ inferioris.
" 50.—Steatoma regionis parotidæ dextræ.
" 51.—Ingens lipoma colli.
" 52.—Ingens hygroma cervicis.
" 53.—Aneurisma trunci carotidis sinistræ.
" 54.—Delineates very beautifully and clearly the various stages in the performance of the operation for the preceding case.
" 55.—Aneurisma arteriæ subclavicæ dextræ supra claviculam situm.
" 56.—Surgical anatomy of the preceding regions.
" 57.—Large aneurism, right subclavian, infra claviculam situm.
" 58.—Anatomical description of the preceding operation.
" 59.—Aneurisma subclavian dextræ infra claviculam.
" 60.—Anatomical description of the operation for the preceding case.

We wish it were possible to convey a correct knowledge of the excellence of these Plates, for we feel very certain that wherever their merits are known, there will be a desire to examine and study them. B.

Jarvis's Adjuster.—In the October No. of this Journal, for 1850, we called the attention of medical readers to

the merits of Jarvis's Adjuster, in the reduction of dislocations. The views we then gave of the instrument have been amply confirmed since that time, and, if possible have gained new strength. We have used the Adjuster in two cases of dislocation of the shoulder, and its vast superiority over the pullies, and over all other means of reduction we have seen, was very manifest. In the first of the two cases, we were requested to visit a fracture of the arm, in the night, and we went without the instrument. The case was found to be a severe dislocation of the shoulder, caused by a fall through an open cellar door, the shoulder striking a barrel standing on its end, on the floor of the cellar. There was a great degree of violence done to the soft parts, and the head of the humerus was driven into the axilla. The subject of the injury being some distance from the instrument, reduction was attempted by the aid of a number of men, and for a while eleven men were engaged in extension and counter-extension. But the bone was immoveable. The Adjuster was sent for and applied, and in a short space of time, and with but little suffering on the part of the patient, the reduction was effected. We are confident that the pullies would have required a greater length of time, and would have inflicted more suffering than the Adjuster.

A few days since a large, muscular boatman called at the office of the writer, for the purpose of having a serious dislocation of the shoulder reduced. The bone was driven deep into the axilla, and it had resisted the attempts that had been made at reduction. The subject of this dislocation had suffered with the evils of a former one, and he dreaded the attempt at extension and counter-extension. The Adjuster was applied, and a few circles of the pinion wheel restored the bone to its place with an audible snap, and the patient was so much delighted that he declared that a man with a dislocation

of the shoulder might afford to walk fifty miles to secure the services of such an instrument as the Adjuster, rather than submit to the ordinary means of reduction.

Nothing could induce us to be without this instrument; with its aid dislocations are disarmed of the annoying character they once possessed. B.

American Medical Association.—We copy the following from the Charleston Medical Journal:

"The Committee of Arrangements request all societies and other institutions authorized to send delegates, to forward a correct list of those selected to attend the next annual meeting, to the Secretary, Dr. H. W. DeSaussure, at Charleston, S. C., on or before the first day of April.

"In consequence of the resignation of Dr. Stillé, one of the Secretaries, from ill health, all communications intended for the next meeting of the Association must be addressed to the remaining Secretary, Dr. H. W. DeSaussure, Charleston, S. C.

"The Fourth Annual Meeting of the American Medical Association will be held at Charleston, S. C., on the 1st Tuesday of May next.

"Editors of Medical Journals will please give the above notice an early insertion in their respective journals."

There was an error in the above announcement of the Charleston Medical Journal, which we have corrected, the more especially as the error has passed unchanged into a number of the Medical Journals. The error is in stating that the meeting of the Medical Association is to be held in Charleston, S. C., on the *second* Tuesday, (13th) of May. It should be the *first* Tuesday, (6th) of May. The meetings of the Association are regularly held on the first Tuesday in May, and the fact should be extensively known, or some of the delegates may get to Charleston after the adjournment. B.

THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY.

EDITORS.

LUNSFORD P. YANDELL, M. D.
PROFESSOR OF PHYSIOLOGY AND PATHOLOGICAL ANATOMY IN THE UNIVERSITY OF LOUISVILLE.

AND

THEODORE S. BELL, M.D.

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THE

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OF

MEDICINE AND SURGERY.

MARCH, 1851.

ART. I.—*Clinical Observations in Private Practice.* By Dr. E. B. HASKINS, of Clarksville, Tenn.

(CONTINUED FROM PAGE 10.)

OBSERVATION III.—*Four Cases of Cerebral Disturbance, connected with Enlargement of the Spleen.*

CASE I.—On the 14th of October, 1842, I was summoned to see a young gentleman, about 18 years of age, well grown, and of a good constitution. He had been the subject of intermittent fever during the past summer, and up to near the time of the present attack. The chills had been, from time to time, arrested by quinine, but they would soon make their appearance again.

He had never kept his bed longer than a day or two at a time, and his general health was not thought to be impaired. On arriving, I was informed that the patient had had a fit; that he had fallen, insensible, after a hear-

ty supper; that his feet were placed in warm water, and in five or ten minutes consciousness was restored; no convulsions. I found the young man lying on his back; knees slightly flexed; countenance dull and inexpressive; listless—could with difficulty arouse the mind sufficiently to procure answers to questions; respiration slow and heaving; pulse slow and rather full; complains of no pain. On applying the hand to the abdomen, a tumor was felt occupying the left hypochondrium, extending from the cartilages of the ribs half way to crest of ilium, below, and quite to the *linea alba*, in front. The surface of the tumor was even, and gave a flat sound to percussion. Venesection to twelve ounces, four dry cups over the tumor, and a brisk cathartic, constituted the treatment for the time.

This case fell into other hands, and I do not know the treatment pursued; he recovered, however, after several months' confinement.

Case II.—J. H., male subject, aged about 16 years, of spare frame, but of general good health, was attacked to-day (August 1, 1846,) with a fit, on account of which I was called. The "fit" consisted in falling and remaining insensible for a few minutes, and waking up alarmed. He has had chills during the preceding summer and latter spring months, for which he has taken largely of quinine; has lost flesh, and become pale; appetite good; has continued to exercise freely.

Present symptoms—one hour after seizure: Decubitus dorsal; legs extended; skin pale; countenance inexpressive; tongue clean and moist; pulse slow and natural in volume; respiration slow; dullness of mind, answering questions with great hesitation; great dread of dying.

On examination, the spleen was found much enlarged, firm and yielding a flat sound on percussion; no pain on pressure; bowels confined. Calomel grs. v, followed in

five hours by a dose of castor oil; hot fomentations over the entire region of the belly.

August 2d.—Medicine has produced several motions from the bowels; patient feels much relieved; condition of spleen the same. He was now put upon the following mixture*—a tablespoonful twice a day, morning and noon—

℞. Ferri sulph., ℈j,
Pulv. columb., }
Pulv. rhei, } āā ʒj,
Zinzib., }
Extr. cinchonæ, ʒss,
Tinct. aloes socot. f., ℥ij,
Aq. cinnam. f. ℥vij. Misce;

together with dry friction over the left hypochondriac region morning and night. This case went on to rapid recovery. The chills disappeared in a fortnight; the spleen gradually reduced; color returned to the skin; and in six weeks health was restored.

Case 3.—J. M., ferryman, about 28 years of age, of fine constitution and stout frame; has been the subject of chills for the last two months, for which he had taken several large doses of quinine, and some purgative medicines; has not ceased to labor, except for a few hours at a time; appetite has been very good; was taken to-day, July 9th, 1848, with great prostration of strength and "strange feelings." Decubitus dorsal; knees flexed; pulse slow and rather feeble; respiration slow and labored—more a succession of deep sighs; countenance vacant; eyes fixed upon some object, with disinclination to remove them; attention difficult to arouse; answers questions slowly and with hesitation; says he would cease to

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*A modification of the "spleen mixture" so highly recommended by Mr. Twining in vascular engorgement of the spleen.—*See Diseases of the Liver and Spleen, by William Twining.*

breathe if he were to fall asleep, that he has to breathe by effort of will; does not know where he is, but knows his family and physician. On conducting further examination by palpation, the spleen was found much enlarged and tender to firm pressure; tongue white and coated, bowels constipated. About five ounces of blood taken by cups from left hypochondrium; warm fomentations over entire abdomen; half dozen pills of comp. ext. of colocynth.

July 10th. Bowels have been freely moved, and patient feels better. The modified spleen mixture was ordered as in case second, with hot fomentations to belly twice a day. Health was restored in five or six weeks.

Case IV.—September 5th, 1849, I was summoned to see a little boy, abont 4 years old, who has had frequent attacks of intermittent fever during the past summer, which were always arrested by quinine, but would recur again in a week or two; general health but little impaired; appetite has been good, and was playful up to the time of the present seizure. I was told by his parents that he had had a "worm fit;" that soon after a hearty dinner he lay down, and as he fell asleep he was taken with the fit; some distortion of features, spasms of the extremities and muscles of the neck, with stertorous breathing; that he was bathed about the face and neck with spirits of camphor; his feet were rubbed, and in a few minutes the "fit went off." I found him lying in his mother's lap, dozing; face pale; respiration natural, except frequent sighing; pulse rather increased in frequency; temperature natural; condition of bowels not known; when aroused speaks hurriedly, and with agitation, but soon falls again to dozing. Abdomen tumid; spleen distinctly felt enlarged, firm, and pressure excited no manifestations of tenderness. He was placed in a warm bath up to the hips; a dose of castor oil and

spirits of turpentine was given; and flannel wrung out of hot brandy was applied to the abdomen.

The bath was directed to be used once a day, and a teaspoonful of the spleen mixture twice a day. I did not see this case again until late in the fall, when it was entirely restored to health.

Reflections.—I do not remember to have seen, anywhere, such phenomena as are detailed in this Observation, ascribed to enlargement of the spleen. It is true, Andral (Med. Clinic) has recorded two cases of apoplexy in which the spleen was found enlarged, and another where it was very *small* and *dense;* but in all three of his cases the heart was hypertrophied—a more obvious cause of the cerebral affection. Louis* has "examined many subjects who died suddenly, and in an unexpected manner, without being able to decide upon the cause of death from the state of the organs, I (he) always found the spleen very small." What influence, if any, the spleen may have exercised in the production of the sudden and unexpected seizures in those cases observed by Louis, as well as these here recorded, I will not attempt to define, as every thing on this subject could only be received in the light of hypothesis, whilst the physiological relations of that organ are so imperfectly understood. It may not be out of place, however, to remark that the very opposite conditions of *enlargement* and *diminution* of an organ, are not incompatible with *identity* of pathological influence; for an enlargement of the liver, and a certain species of atrophy of that organ (cirrhosis) may alike cause ascites.

It has for a long time been known that apoplexy and palsy are very prevalent in certain marshy districts.

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*Louis on Typhoid Fever, translated by H. J. Bowditch, M.D.

May not the spleen, in those cases, have been found in a pathological state? The fact that that organ is more *specifically* affected in protracted intermittents, favors at least an affirmative supposition. If the cases detailed in this paper be regarded as apoplectic, they were certainly comparatively light, and would come under the head of what some writers term *transient* or *fugitive* apoplexy. That the state of the spleen and the cerebral phenomena in these cases, stand related as *cause* and *effect*, derives support from the fact, that treatment was directed alone to that organ, and that no recurrence of seizure took place, but, on the contrary, convalescence ensued.

Have other physicians observed similar cases? If they have, I trust they will report them. I know that the attention of *young and inexperienced* physicians is liable to be more exclusively occupied with the organ that presents the most evident signs of disease, and that the *older* members of the profession, relying upon their sagacity, often diagnose hurriedly and without due examination; whilst *all* who do not preserve notes of their cases, may observe similar ones at too distant periods to be connected in the memory, and each individual case is passed over as simply a coincidence; and thus it is obvious that cases of great interest may be wholly lost to the profession. That physicians of age, experience, and *secure local reputation* are very prone to fall into the habit of hasty and careless examinations, is a truth that cannot be too often presented to the minds of those young men who desire to escape the mortification and odium of blunders in diagnosis, and perhaps fatal errors in treatment.

I will further remark, (and beg pardon in advance for this digression), that in protracted chills — after they have assumed a chronic form—I have never found qui-

nine to restore the health of the patient. I have for several years, in such cases, used the mixture, (as used in the last three cases) with decided success. I prescribe its daily use without regard to the chill, and as the health is restored the chills disappear.

(To be continued.)

ART. II.—Translations from *Archives Generales de Medicine*, for December, 1850. Translated by WM. H. COBB, M.D., of Louisville, Ky.

M. Fuster, a Professor in the Medical Faculty of Montpellier, sent to the Academy of Medicine, on the 19th of November, a communication upon arsenical medication in intermittent fever. This communication resolves itself into the following propositions:

1st. Inveterate cases of intermittent fever, even when proving rebellious to the use of quinine, yield readly to the exhibition of arsenic.

2d. If the arsenic prove inefficient in producing a cure, quinine invariably proves remedial.

We commence, in this variety of fevers, with five centigrammes of the arsenic acid, taken three times during the day, and increase the dose according to the indications to nine or ten centigrammes. The best formula for its administration, whether it be exhibited by the mouth or given in the form of enema, is to incorporate it with twenty times its bulk of sugar of milk as soon as the disease has been subdued, the dose is to be diminished in the same ratio that it was increased, until the initial dose be attained. No bad effects attend its use; the medicine is generally well borne by the sick. In the regions of country south of Montpellier, emetics, given at the commencement and in the course of the

treatment, favor, maintain or rëestablish the tolerance of the acid.

No special regimen is required, except on those days that the emetics are administered. The visceral engorgements attendant upon the fever are never resolved as speedily as the disease itself, they only diminish, and finally disappear, after the general health has been permanently rëestablished.

Dr. Aran, physician to the central office of the Hospitals, presented a paper upon "the local use of Anæsthetic Agents," and more especially upon the relative value of anæsthetic agents with a view to this medication. The following are the conclusions at which he arrived:

1st. All volatile substances which we recognize as possessing general anæsthetic properties (the different varieties of ether, chloroform, Dutch oil, or chloruret of olefiant gas, aldehyd, benzoin) also possess local anæsthetic powers when applied endermically.

2d. The intensity of their local anæsthetic power is not in proportion to their general effect, but rather in an inverse ratio to it. This is the explanation of the fact that, when considered with a view to its local anæsthesia, Dutch oil exceeds all the aforementioned substances, that chloroform is superior to the ethers, and that acetic ether surpasses the other kinds of ether.

3d. Of the different anæsthetic agents, some, as the ethers, aldehyd and benzoin, can be applied to the skin, even in an undiluted form, without producing any irritation; while others, on the contrary, possess an acrimony which render them more or less irritating, chloroform, even when of the purest form, is of this class; when applied in small quantity, it causes a slight sensation of warmth, which gradually increases to a sensation of extreme heat, and even determines vesication if the

contact be prolonged, or the quantity of chloroform poured upon the skin be at all considerable. This irritating action is developed in a more energetic manner if the evaporation of the chloroform from the surface where it was applied, be allowed to proceed freely. The Dutch oil also possesses irritating properties but to a much less extent.

4th. As before stated, the best of all the anæsthetics, with a view to their local application, is the Dutch oil, or chloruret of olefiant gas; its anæsthetic action continues longer even when employed in small quantities, from fifteen to twenty drops, upon the painful surface; it produces but a very insignificant amount of cutaneous irritation; whereas chloroform induces heat and pain. The former has an ethereal odor, slight and rather agreeable than otherwise; while on the other hand, the ethers, aldehyd and benzoin, possess a pungent odor, which is illy borne by the sick; aldehyd and benzoin, in particular, have a very disagreeable smell when concentrated. The only objection to the introduction of the Dutch oil into general use is that in the present state of its manufacture, its price is very dear; but the opinion seems to be generally entertained, that in a short time its price will be reduced to the same as that of chloroform.

5th. In order to obtain sufficient local anæsthesia, it is not at all necessary to employ a large quantity; with from 15 to 20 gtts., at the farthest, of the Dutch oil poured upon the part affected, and covered with a wet compress and a piece of oilcloth, we can allay the pain, in the greater number of cases indicating the use of anæsthetic agents.

At the same session of the Academy of Medicine, a memoir was read by Dr. Sestier, upon "Intra-laryngeal œdema, and œdema affecting the back part of the mouth,

supervening in cases of œdematous laryngitis." The author has collected 41 cases of œdematous laryngitis with œdema of the interior of the larynx; the œdema was sometimes general, (in 23 cases), sometimes partial, (in 18 cases). But whether it be general or partial, it almost invariably affects the vocal chords, causing a contraction of the glottis. This lesion is met with quite frequently in œdematous laryngitis, in about four-sevenths of the cases. It is important to consider this affection, because it tends to obscure the diagnosis of œdematous laryngitis, by substituting for the characteristic contrast of expiration and inspiration, a difficulty of breathing, because it aggravates the dangers already attendant upon the disease from the infiltration of the superior folds of the mucous membrane of this organ; and especially with a view to its treatment, as it renders the necessity for bronchotomy more necessary than when the superior folds are alone infiltrated.

Relative to the diagnosis of intra-laryngeal œdema, the author imposes the following conditions:

1st. Pay attention to the state of the patient preceding the attack, inasmuch as œdema within the larynx has only been clearly proved to exist when the patient was more or less gravely affected prior to the onset of the disease.

2d. Examine the etiological form of the disease, as intra-laryngeal œdema has never been observed when the affection of the larynx has been consequent upon inflammation of the throat, occurring in an individual previously enjoying good health, but very rarely in œdematious angina superadded to general inflammation, or in the case of a serous diathesis more or less advanced and indicated by anasarca or other serous effusion. The presence of laryngitis, whether it be acute, subacute or chronic, would lead us to suspect that the interior of the larynx is invaded by the œdema, as occurs in three-

sevenths of the cases. The supposition is rendered the more probable if the angina be connected with a serous diathesis; the proportion being three-fifths of the cases.

3d. Observe whether the contrast between the difficulty of inspiration and the facility of expiration exists or not; for in seven-twelfths of the cases in which this marked difference did not exist, still the œdema affected the interior of the larynx.

4th. Finally, inspect with care the back part of the mouth and assure yourself whether this region is infiltrated or not; for in twelve examinations of œdematous angina, with œdema extending more or less from the throat; intra-laryngeal effusion existed eleven times.

The œdema of the back of the mouth is sometimes general, sometimes partial; if it be partial, it may be confined to so small a space as to require a very minute and attentive examination to discover it. The uvula is most frequently affected; then come, in the order of their frequency, the soft palate, base of the tongue, pillars of the palate, sides of the cheeks, tonsils, glosso-epiglotic fold, pharynx, and lastly, the palatine arch. The infiltration of the back part of the mouth often presents the character of phlegmonous œdema; the infiltrated liquid is sometimes situated deeply in the submucous cellular tissue, sometimes almost beneath the epithelium; in which case the œdematous portion presents the appearance of a distended vesicle, vesicular polypus, or phlyctæna. Œdema at the posterior part of the mouth has been noticed in one-fourth of the cases. It is very frequent in œdematous angina consequent upon acute inflammation of the throat, but it appears more especially in the cases of angina occurring during the course of anasarca or general dropsy. It is important to consider this œdema, because it may enable us to prevent the subsequent invasion of œdematous laryngitis, to discover it at its first onset by giving a

special significance to the slight gutteral and laryngeal symptoms which so obscurely mark the first moments of the affection, to facilitate the diagnosis after its complete development, and finally to guide us in the choice of our therapeutic means. The author particularly recommends, among other direct means likely to prove successful, scarifications or incisions into the infiltrated parts. These scarifications, according to the author, may be very useful, if the laryngeal infiltration depend upon any obstacle to the venous circulation, having for its seat the heart or the course of the large cervical veins, or when dependent upon anasarca consecutive to scarlatina or miliary fever, upon a dropsical cachexy supervening upon repeated attacks of intermittent fever, upon scorbutic or cancerous affections; in the case of laryngeal œdema supervening immediately or after a short time upon wounds of the neck, with serous infiltration into the cellular tissue around the larynx. The chances of success are notably less if the laryngeal œdema be symptomatic of a very slight inflammation of the throat or larynx, or consecutive to a chronic laryngitis. The chances are almost nothing if the laryngeal inflammaton be owing to an acute and intense inflammation of the throat and larynx. At all times, it is probable that, even in this last form of the disease, scarifications would succeed, if resorted to in the first moments of the formation of the inflammatory œdema, because at that period we sometimes find merely a limpid serosity soon to be replaced by plastic lymph.

Dr. A. Mayer, of Belfort, addressed to the Academy of Medicine, November 26th, a memoir entitled, "The use of multiple scarification of the neck of the uterus, effected by means of a new instrument, in the treatment of leucorrhea symptomatic of uterine engorgement."—*The author* proposes to establish in this memoir,

1st. That there exists a variety of leucorrhea symptomatic of acute or chronic engorgement of the womb or of the neck alone.

2d. That this variety, rebellious under the usual modes of treatment, requires local sanguineous depletions.

3d. That leeches applied at a distance from the neck are inefficient, and that their application to the neck itself is attended with so much difficulty, that this method has fallen into disuse.

4th. That it is possible to substitute, for the local action of the leech, numerous scarifications of the external surface of the cervix uteri.

5th. That an instrument specially adapted to this organ, and rendering the operation much easier of execution, merits the attention of practitioners, and a rank in the treatment of an affection often rebellious to every other form of treatment.

SELECTIONS

FROM

FOREIGN AND HOME MEDICAL JOURNALS.

On the Exhibition of Quinine in the Febrile Paroxysm. By Otis F. Manson, M.D., of Granville co., N. C.—The introduction of quinine as a remedy in the treatment of remittent fever, *given in the remission*, was perhaps coeval with its discovery as one of the constituents of cinchona, the bark itself having been used in that stage of the disease by Lind, Senac, Clark, Balfour and others, anterior to its disintegration; but it was perhaps not more than twenty-five years ago that this salt was administered in the exacerbation, and at this time the practice is almost exclusively confined, in our own country, to the extreme southern and western States.

A number of my professional friends in Virginia and North Carolina having adopted this plan of treatment, at my suggestion, I have felt it my duty, in compliance with their solicitations, to place within their reach all of the knowledge I possess on the subject, drawn from my own experience and many others; and I therefore embrace the opportunity to do so, offered by your flattering invitation to contribute to the pages of your journal.

Remitting fever has for many years assumed a congestive character, in the vast majority of instances being attended with the periodical recurrence of a stage of congestion, commonly termed chill; this stage being characterized by a diminution of temperature, varying from a slight coldness at the tips of the nose, fingers, and toes, to a fearful frigidity of the whole extremities,

and in some few instances a death-like coldness of the whole surface of the body; these latter cases being termed, *par excellence*, "congestive fever."

Although in many instances this stage is not manifested after the initial chill, by any discernable reduction of temperature in any part of the body for several days, yet it sooner or later becomes apparent to the touch of the attendant, although unfelt by the patient, who, instead of experiencing any sensation of cold, is oppressed with intense heat and unquenchable thirst; indeed, we have often discovered the presence of this stage by the increased urgency of this thirst and desire for removal of the clothing.

At the same time that this coldness of the extreme parts is perceived, *the rest of the body is of high febrile heat;* the pulse quick, frequent and small, the breathing laborious, deep sighing, oppression at the præcordia, pain in the head, loins and limbs, anxiety, nausea and vomiting.

After a lapse of time, varying according to the violence of the attack, but averaging about an hour, this stage terminates in the exacerbation, the heat becomes now diffused over the whole surface, the pulse becomes diminished in frequency, and increased in fulness and force, the pains and thirst still continuing, occasionally, though not commonly attended with delirium and other indications of cerebral disturbance; pain on pressure of any of the abdominal regions not generally present in the first exacerbation, but more apparent as the disease advances, especially in the epigastric region. This stage, after a lapse of 24 or 48 hours, according to the type of the disease, is succeeded by a recurrence of the stage of congestion; the tongue now becomes sensibly altered, but so variable in appearance that no particular description will apply to it. Evidences of organic irritation in the great cavities, particularly of the stomach, bowels and liver, now become more apparent, and the abdomen becomes tense, tender, and in some cases meteoric. From the fifth to the fifteenth day, the disease terminates, without aid, in 1st, intermittent fever; 2d, fever of a more continued character; 3d, death.

I have deemed it necessary to give this brief description of this disease as it usually appears in my field of

observation, in order that the following remarks may be fully understood, as the object of the article is chiefly to display the effects of quinine in this disease.

Given in free and full doses of from twenty to thirty grains in the exacerbation, quinine reduces the pulse in frequency, fulness and force; it removes local determination to the head, chest and abdomen, thereby relieving pain, restlessness, nausea, vomiting and diarrhœa, producing generally a copious, warm diaphoresis, and, in short, to expel fever and

——— "all its dire attendant train,"

safely, surely and expeditiously, in a period of time varying from four to ten hours from its administration.

But along with the employment of quinine the following means are resorted to:

Called to a patient in the exacerbation, venesection is practised in every case where the pulse will justify it, but it is rarely that this is called for. In fact, the general experience of myself and *confreres* is adverse to the use of the lancet in this affection; the pulse, though often full, and apparently tense, is generally *compressible*. Local bleeding by cups and leeches will usually be sufficient, and if there is tenderness on abdominal pressure, or other symptoms of visceral implication, these should be freely applied. Should symptoms of cerebral irritation be present, a copious flow of blood will be obtained by cups to the mastoidal regions.

This is to be immediately followed by a cathartic dose of calomel, say twenty grains, and in three hours thereafter by twenty grains of quinine, diffused in a wineglassfull of cold water, and if the febrile excitement is intense, thirty grains may be given, but twenty grains will in almost every instance be sufficient for the first dose. Four hours are now suffered to elapse, during which the local bleeding is continued, if required. In this time, in a vast majority of instances, the fever will be considerably reduced, when the quinine should be repeated in doses of six to ten grains every four hours, until thirty-five or forty grains are taken. If in four hours after the first dose has been taken the fever has not sensibly declined, the large dose (twenty grains) may be repeated; but in many hundred cases the first dose has seldom failed in that time to

produce an evident declension of the fever, rendering the after employment of the medicine, in doses of six to ten grains, amply sufficient to effect a complete solution of the disease, the great aim being to throw into the system at least thirty-five or forty grains before the period for the recurrence of the next paroxysm.

In cases attended with obstinate vomiting the stomach should be previously calmed by the administration of forty or fifty drops of laudanum, and if this should be rejected the laudanum may be given by the rectum in double that quantity. But if the gastric irritability should not yield to the anodyne, after local depletion also has been employed as before advised, (and in some cases the stomach will not bear the presence of any medicine long enough to induce its effects,) the quinine must be given by the rectum. One drachm of quinine should be suspended in four ounces of mucilage of gum arabic or thin starch, and given at once as an enema; to be repeated at the same intervals as *per orum*, and in thrice the quantity above recommended.

If, however, the stomach will bear the quinine for an hour, the nausea and vomiting will in almost every instance cease.

In some few instances, although the foregoing treatment has been adopted, a slight exacerbation may be perceived towards the next evening; but this will generally be of brief duration, and will be followed by a complete intermission, when the quinine may be given in doses of ten grains every morning for three or four days.

Although I have described the effect of large doses of quinine in this disease, it will be perceived that I have not proposed to give any name to the group of sequences induced by its action, for the reason that no single term yet designated will denote its peculiar properties; but the term "sedative," approximates more nearly to its proper designation than any other, and has generally been adopted by the advocates of its employment.

I could fill the pages of your journal with extracts from the writings of distinguished physicians of our own country to corroborate what I have stated, but, instead of doing so, must refer the skeptic to our Southern and Western journals.

To those who have observed the action of this remedy in the different modes and various conditions of the system in which it is administered, the inference is irresistible, but its effects are solely dependent upon its salutary action upon the nervous system. This effect is so often immediate, arresting the disease at once, before it could be *absorbed in the blood, or resolve inflammation*, that we are compelled to regard its action as purely nervous. Now if it be contended that this fever is merely symptomatic of gastro-enteric lesion, none will surely argue with Broussais that quinine arrests the febrile movement by its local application to the inflamed surface; that it has any power to effect this, has never been demonstrated, and is opposed to the experience of all. Or if it be contended with Liebig, that in fever some of the elements of the brain are removed which are supplied by the alkaloids of bark, &c., we may reply, that prior to this restoration of the lost elements of the cerebral substance, the agents have to be subjected to the functions of absorption and nutrition, both so imperfectly conducted amid febrile excitement, and for the performance of which a far greater period of time is necessary, even in health, than is amply sufficient for the sanatory action of quinine. These conflicting, but ingenious theories of two great minds, only serve to make the "darkness visible" that surrounds the essential nature of disease and its remedies.

The effect of quinine upon the pulse is one of the most remarkable of its powers in this disease. I have reduced the pulse from 140 and 150 pulsations in a minute to its normal standard in six hours. Indeed, I have in several cases desisted from its continuance, for fear that its sedative effect might be carried too far. The organic lesions, therefore, so often developed in the course of this fever, so far from contra-indicating its use, are certainly relieved by it, or their cure accelerated. Where blood-letting, both general and local, assisted by the other usual antiphlogistic measures, have failed in arresting cerebral inflammation, quinine in a few hours completely arrested the progress of the disease, reducing the pulse, calming delirium, promoting free diaphoresis, and inducing sleep, from which the patient would awake to speedy convalescence, quinine would seem to effect this by allaying the morbid excitement of the nervous system, upon which

this increased action of the heart and arteries is dependent, and from the continued excitement of which the organic lesions developed would seem to arise.

It will need but a short experience with this article to convince the careful observer that it possesses the power of allaying nervous irritation, spasm and pain. Neuralgia, whether intermittent or continued, will almost invariably yield to its sedative and anodyne properties.

Those to whom the facts and views herein set forth are entirely novel, may here enquire, "If there is no *danger* in administering quinine during febrile and inflammatory excitement?" Confining my reply to this disease, I unhesitatingly answer, "That there is no danger when given in full and free doses, in the manner which I have indicated!" They may also enquire, "Have all authors on therapeutics committed an error in classing quinine amongst the excitants, in fact, as the first and most valuable of tonics?" To which I reply, that all the standard authorities on this subject I believe to be perfectly correct; but their knowledge of quinine is confined to its tonic, stimulant and antiperiodic character, as it assuredly is in small, repeated doses, but given in large doses it produces the effects I have described; and therefore not only admissible, but indispensable where small doses would not only be improper but pernicious. I speak from great experience with this article. I have given 60 ounces in one fall, (1846,) and I here declare my belief that armed with this agent, remitting fever, if attacked early, is as certainly and completely under its control as ague. I have given it in the chill, the height of the paroxysm and its decline, complicated with indisputable evidences of lesion of the cerebral and abdominal organs without any injurious effect in any case; and to sum up in few words, the sulphate of quinine in full doses allays pain, irregular nervous action and restlessness, diminishes the pulse in frequency, fullness and force, removes local determination and equalizes the circulation, by allaying that morbid excitement of the nervous system upon which remitting fever depends, and consequently relieves the local lesions arising from this exalted action of the circulation.

"Hæc certamina tanta
Pulveris exigini factu compresa quiescunt."

Treatment of Strumous Disorders by means of Preparation of Leaves of Walnut. By Dr. Negrier, Physician at Angers.—[Dr. Negrier has published two memoirs, the first in 1841, and the second in 1844 on this subject. These consisted entirely of practical facts, without any theoretical view either of the disease or remedy, and the experience of five years, and that of several foreign physicians have given corroboration to the facts which the author then advanced. In this, the third memoir, he is desirous to avoid everything beyond a simple statement of facts, and the inferences which directly may be deduced from them. The following general conclusions are deduced by M. Negrier:]

Fifty-six patients, affected with scrofulous disease, in different forms, were treated by means of preparations of the walnut-tree leaves.

In this number, thirty one were cures, and did not afterwards disappoint expectation. Eighteen patients, without being completely cured, underwent a degree of amendment very remarkable in their condition; and the greatest number among them were in the course of being cured. Four patients have obtained no advantage from the use of the medicine, from the state of their sores. Among them was one who was remarkably strengthened, and who, at the time specified, seemed in the course of being cured, under the use of cod liver oil.

Four children died during treatment; but two were destroyed by tubercular phthisis, one by acute *encephalitis*, and the fourth by double pneumonia.

The treatment, by the preparations of walnut-tree leaves, has furnished to him results, which he regards as sufficiently advantageous, in order to justify their serious examination, and warrant their being subjected to the control of systematic observation, particularly by hospital physicians, who have better means than others of administering the remedy accurately and in comparison with other agents.

Experience has satisfied him that the long-continued use of walnut-tree leaves has never caused, in the economy, any unpleasant effects. This medicine, which may

be placed in the class of slightly-aromatic bitters, possesses an efficacy nearly uniform in scrofulous disorders.

The first effect of the preparations of walnut-tree leaves is to augment the activity of digestion and circulation; to all the functions they impart a remarkable degree of energy. A natural question is, whether they exert any special action upon the lymphatic system? The facts recorded by the author lead him to think that they do. Under the influence of their use, the muscles become more firm, the skin acquires a ruddy tint, and speedily parts with its chlorotic paleness. It may be a subject of inquiry whether the walnut-tree leaf contains any other principle than tannin, which is, doubtless, not foreign to the tonic action of this vegetable.

As to comparison between this and other received methods of treatment, the condition in which most of the patients whose cases formed subjects of clinical observation were found, at the time of treatment, sufficiently prove, he maintains, that these different modes of management possessed no efficacy, when recourse was had to the preparation of walnut-tree leaves.

The preparations employed are the following:

The infusions of the walnut-tree leaves are made by placing a good amount (pinch) of these leaves, cut into two hundred and fifty grammes of boiling water. This infusion is sweetened with sugar, or with the syrup to be presently noticed. M. Negrier prescribed from two to three cupfuls of this infusion daily; and as many as five may be given.

The decoction of the leaves, which acts advantageously in the form of lotions, and as a topical application, in which the pledgets for dressing the sores are immersed, ought to be more strongly charged than the infusion. M. Negrier uses a small handful of leaves to a kilogramme of water, and boiling is continued from ten to fifteen minutes. This preparation is also very useful in the form of baths both local and general. Its efficacy is particularly remarkable when used by injection into fistulous passages. The extract is prepared with the walnut-tree leaves, by the method of displacement. By employing the dry leaves, the practitioner has in his power the means of renewing this preparation, as often as he requires, during

all seasons; while, by using recent leaves, it is requisite to prepare it in too large quantity, and it is liable to undergo alteration. The syrup of the leaves of walnut-tree is prepared with the extract by mingling forty centigrammes with thirty grammes of simple syrup. By this means the practitioner knows what are the doses of the medicine which he employs. The syrup may also be prepared with the green leaves; and it is then more aromatic than that which is compounded with the extract; but it is impossible in this case to form a correct estimate of the quantity of the medicine which the patient daily takes. To young children he gives two or three teaspoonfuls of syrup in the course of twenty-four hours. The ordinary dose for adults is from thirty-two to forty grammes; and he has never gone beyond sixty-four grammes.

The pills of the extract of walnut-tree leaves are each twenty centigrammes of extract, rendered consistent by a sufficient amount of the powder of the leaves. Of these, two are taken daily; and he has never gone beyond four daily.

Lastly, in some cases, in which it may be useful to cause friction to be made upon the afflicted region, he employed an ointment composed of thirty grammes of extract of the leaves, forty grammes of lard, and fifteen centigrammes of essential oil of bergamot. The frictions require to be made gently, and for about fifteen minutes twice daily.

It is easy to understand, he observes in conclusion, that, considering the nature of the disease, the salutary effects of treatment are sometimes slow in appearing. He therefore recommends perseverance; and he expresses the opinion that, if in the hands of some practitioners the preparations of walnut-tree leaves have been administered without efficacy, the reason is, that either the patient or the physician became too soon tired with using them. It is, in short, requisite to persevere, when it is remembered, that, in order to obtain a durable cure, the physician has not only to oppose the effects of the malady, but also to effect a thorough change in the constitution of the individual.

[Having published his second memoir in 1844, M. Negrier completed the history of those patients given in the first paper, adding a list of persons treated by the reme-

dy subsequent to the publication of the first memoir, and he gives the following inferences on the result of the observations of six years experience upon the mode of treatment:]—

1. Scrofulous disorders are in general radically cured by the use of preparations of walnut-tree leaves.

2. The action of this therapeutic agent possesses a sufficient degree of steadiness to enable the practitioner to reckon upon the cure of three-fourths of the patients treated by means of it.

3. The action of this mode of treatment is generally slow. It requires from twenty to fifty days according to the nature of the symptoms, and the constitution of the subjects, in order that the effects may be rendered sensible.

4. Patients cured by means of the preparations of walnut-tree leaves almost all retain the health which they have obtained under the influence of this treatment. Few relapses take place.

5. The effects produced by the internal use of the extract of walnut-tree leaves are at first general: the influence of this method of treatment is subsequently evinced upon the local symptoms.

6. In certain forms of scrofulous disorders, it is only after a long time that the efficacious action of this treatment is observed. This remark is particularly applicable to strumous glands not in a state of ulceration.

7. The preparations of walnut-tree leaves exert, on the contrary, a sufficiently speedy action upon the sores and the fistulous openings, whether they are maintained or not by caries of the bones, excepting in persons of dry and nervous temperament.

8. Till the present time, the instances of strumous opthalmia which M. Negrier has observed, have been certainly and more rapidly cured by this method of treatment than by any other.—*Edin. Med. and Surg. Journal, Oct.* 1. 1850. *p.* 271.

Traumatic Tetanus cured by Frictions with Tincture of Belladonna.—M. Bresse, surgeon at the Military Hospital at Rennes, proposed, in 1848, the treatment of traumatic

tetanus by the application of tincture of belladonna, and reported a case, in which it had been successfully employed, in the "Gazette Medicale de Paris" of Sept. 30, 1848. M. Bresse has now placed on record another case which has come under his notice. The patient, one of the *Garde Mobile*, received a wound on the 20th of March; tetanic symptoms appeared on the 5th of April. Frictions of belladonna were commenced on the 6th, and by the 12th the patient was out of danger. Imprudently exposing himself to cold, the tetanic symptoms returned in the muscles of the back, but were quickly removed by again having recourse to the frictions. The tincture employed was composed of five parts of extract to eleven of alcohol, and was applied all over the body, and more particularly over the rigid parts.

M. Bresse adds, that another practitioner has arrested trismus, which he feared would proceed to general tetanus, by the same means.—*Gazette Medicale.—Med. Gaz.* from *Braithwaite's Retrospect.*

Hare-Lip in France.—It is, perhaps, not generally known in this country, that French surgeons are in the habit of operating upon children for this deformity a few days after birth. The justly celebrated Paul Dubois is a great advocate for this practice, which, it is contended, is extremely advantageous, as children at that early period, do not struggle: union is obtained very rapidly, and the little creatures cry but little, take the breast well, and do not seem to suffer much. M. Guersant, surgeon to the children's hospital, stated the other day, before the surgical society of Paris, that out of seven children operated upon almost immediately after birth, he failed only once; whilst out of the same number of children one month old, he failed five times. He attributes this disproportion to the fact, that newly-born children can do without the breast during four days; (?) they thereby are not apt to tear open the sutures by efforts at suction.—*Lancet*, from *Ib.*

On the comparative liability of Males and Females to Insanity, and their comparative curability when insane. By Edward Jarvis, M.D., of Dorchester, Massachusetts, pp. 32, 8vo.

This is an extremely interesting and valuable document. We regret that our limits will not permit us to quote largely from it; we must therefore content ourselves with a mere statement of the author's conclusions.

It would seem that males are more liable to insanity than females, although some countries are an exception to the rule; for instance Belgium and Norway. This is what we would naturally infer from the fact that men are more exposed to the exciting causes of the malady.—Amongst males by far the most frequent case of insanity seems to be intemperance, next to this is hereditary tendency: amongst women the most powerful cause is impaired health; and next to this ranks domestic trouble. Women also appear to be more frequently than men, affected with hereditary insanity.

From the reports of 189 Lunatic Hospitals, we find that amongst the males the recoveries amount to 40,6 *per cent.*, amongst the females to 43,9 *per cent.* Dr. Jarvis's explanation of this singular fact is doubtless as correct as it is philosophical. It amounts to about the following: That the causes which beget insanity in the male, are such as frequently produce structural lesions, whilst amongst females the preponderating causes are functional derangements. With this fact in view, we have no difficulty in reaching the third proposition in this pamphlet; that the rate of mortality of the insane, is much greater amongst males than females, the ratio of the latter to the former being as 15 to 21.

From pretty extensive researches, Dr. Jarvis concludes that the ratio of mortality from nervous diseases is much higher among males than females, including both sane and insane. Of 2,169,875 deaths, of which 1,163,198 were males, and 1,066,677 females, 16,15 *per cent.* of the males, and only 13,85 *per cent.* of the females died of nervous disorders. This little piece of statistics will doubtless astonish those doctors who are always assuring the ladies that their complaints are "all on the nerves;" or, supposing that women are really more liable than

men to nervous disorders, it may serve to explain the origin of the old saying, that "a sickly woman never dies."—*North Western Med. and Surg. Jour.*

Sick Headache cured by Full Inspirations.— When a medication is based upon the experiments made upon himself by an honorable professional brother, it is far better, in reporting it, to give his own words. We will then simply publish the communication of M. Tavignot upon the new therapeutic agent in the cure of this painful, if not dangerous disease.

"It was in the following manner that I discovered the efficacy of this new and apparently strange method for the cure of this affection. In October last I was attacked with pain and weight in the head, anorexia, a physical and moral prostration, etc. Experience taught me that I had to remain in this state for twenty-four hours. I concluded that this peculiar state of the nervous centers might depend upon a stagnation of blood in the venous sinuses of the dura-mater, as M. Auzias Turenne supposes, or upon an imperfect æration of this fluid. I immediately commenced respiring freely and fully during several minutes. I perceived a sensible relief, which induced me to continue, and in a short time I was cured. I got up and undertook my usual occupations, as I felt but a slight pain in my temples, which vanished in a quarter of an hour. This result was doubly agreeable to me, as it furnished me with a new and practical remedy. In ten persons, upon whom it has been tried, one-half have found an instantaneous relief, and in the others there has been an amelioratjon, or a complete failure. However, upon interrogating with care those who were not relieved, I am convinced that they did not have genuine sick headache: they had a neuralgic pain of the head, but it was not accompanied with that profound prostration and melancholy that I have mentioned as characteristic of the disease. It seems to me to be useless to search for the modus operandi of full and profound inspirations in the cure of sick headache It is evident that by this means the venous circulation is accelerated, and the chemico-physio-

logical act of hematosis is hastened. Then the explanation of the success of this new method is in one or the other of these conditions, or perhaps in both.—*L'Observation*, from *Southern Med. and Surg. Jour.*

Errors in Diagnosis. By C. H. Cleaveland, M. D., of Waterbury, Vt.—Perhaps in no other way could the younger members of our profession be more benefited, than to have pointed out to them the errors that have occurred by a too hasty and incomplete investigation of cases before deciding upon the nature of the case, and the course of treatment necessary to pursue to ensure a cure.

Some years since a child who was playing with a *button* put it into his mouth, *and he said he had swallowed it;* but that night he was taken with a hoarseness somewhat resembling croup, and the parents becoming frightened, sent for their physician, who, after listening to the child's breathing, discovered that the button was lodged at the bifurcation of the trachea, or at the commencement of the bronchial tubes.

He called an elderly physician, his former preceptor, in consultation, who confirmed the diagnosis, and at once they resorted to tracheotomy, but did not that day succeed in dislodging the button, although they thought they could distinctly feel it. The next day they reopened the orifice, but with no better success.

After a few days, the button was found in the boy's fæces, but he entirely lost his voice, and the last I heard of him he remained mute.

Several years since, a little school-girl fell from a tree, where she had climbed to procure some twigs, and her injury was so great that a physician was sent for, who discovered that she had broken her thigh, at the upper third; and after she was carried to her home, he reduced the fracture, and made the proper dressings, enjoining that the limb should not be moved, or the splints displaced until his next visit. The second day, when he called, the little patient was not in bed; and, on looking

out of the window, he discovered her feeding the chickens in the farm-yard.

The first year of my practice, a girl, aged about fourteen, was attacked with the epidemic erysipelas at the time of her first menstruation. The disease located itself upon the uterus, and soon her abdomen was as large as a mother's at six months' advance in pregnancy. One day, an old physician, hearing I had a difficult case, volunteered a call, and after a proper examination, at first pronounced her difficulty a suppression of urine; but in that he was overruled by the mother, who gave him ocular proof of his error. Next he said there was an abscess forming in the flesh of the lower part of the abdomen, and had a large poultice applied, *to draw it to a head.*

In a neighboring town, a man had been sick several days with a peculiar pain, and strange swelling of the abdomen; and the two medical attendants were doing all they could with fomentations, poultices, etc., to induce suppuration, when my friend Dr. B. was called in. The *catheter* gave him immediate relief.

I could fill pages with similar errors, but think these will answer as well as a larger number.—*N. H. Journal of Medicine.*

Acephalous Monster.—As there is no truly philosophical hypothesis as to the origin or cause of those spots or marks on the skin of children when born, or other preternatural perversions of conformation—whether it be the influence of the maternal imagination upon the fœtus in utero, or other causes, I thought the following case might interest you and your readers.

Was called to attend the first labor of Mrs. T., aged 20, of a highly nervous temperament, but had always enjoyed vigor and health till the fourth week of her pregnancy, when she became highly excited by very slight causes. At times, her friends informed me, she was so unreasonable in her requests as to give them fears she would become insane; but after the first two months she became healthy and tranquil, and looked forward to the period of her confinement with firmness.

I found her, four hours after the accession of labor pain, and one hour after the membranes were ruptured, with active pains, and on examination found the os dilated to twice the size of a crown-piece, with breech presentation. After waiting a while, a second examination revealed the true nature of the presentation. Both feet had passed under the pubis, with heels resting against the thighs, while the breech was well down in the pelvis. I made several strong efforts to cause the feet to go above the pubis, but failed in each attempt. As the pelvis was evidently above the ordinary size, and pains strong, I concluded to let the labor progress, which was brought to a close without any unusual trouble or suffering; but the child was a species of that class of monsters termed *acephalous*. The entire head was wanting down to the ethmoid and sphenoid bones anteriorly, and lower than the superior surface of the cerebellum posteriorly. There was a small mass of pulp which lay over the body of the sphenoid bone, from which the optic nerves appeared to take their rise. The whole surface was covered by a thin, transparent membrane, through which the parts beneath could be seen, giving it the appearance of flesh or muscle. The same appearance was upon the breech and knees. The glutei muscles on either side were wanting. The patella of each leg, and the integuments about them, were also wanting. Both knees and breech were covered by the same kind of membrane and had the same appearance as the head. One thing I should mention here; at both knee and hip joints the legs were permanently flexed, which accounted for the difficulty in the labor.

A sheet was folded about the child, so that it was impossible for the mother to have seen it; and while waiting for a pain to remove the placenta, I asked her if she had been frightened during her pregnancy, or seen anything to excite disgust. She said immediately, "I have." "Soon after I became pregnant," said she, "I went down into a basement room, and came upon a rabbit which the cat had brought in." "Well," said I, "how did it look?" Said she, "the cat had eaten off the top of its head, knees and tail, and I was so frightened I did not get over it for days;" said she had often told her husband she feared it would injure her child some way, as she could not keep it out of her mind. When shown the child,

which she was anxious to see, she exclaimed, "that head and those eyes look precisely like that rabbit's!"

I have always looked upon such monstrosities as *accidental* changes, which take place during the first stages of gestation; but this case put all my philosophy into the shade. What think you? Was this an accidental case, or did the influence of the mother's imagination cause that perversion? Yours,

G. W. GARLAND.

P. S. By-the-way, when a nævus growth does not exceed the size of a hazel-nut, it may be removed or destroyed by a daily application of tinct. iodine *strong.*—*N. H. Journal of Medicine.*

On the comparative value of the Diagnostic Signs of Pneumonia. By Professor Alison.—The following valuable observations occur in the course of a clinical lecture on some cases of pleurisy and pneumonia:

As to the special indications of peripneumony, whether with or without attending pleurisy, I think we shall find the most important and practically useful to be that given by the *sputa*—i. e., the appearance of tenacious and at first translucent sputa, thoroughly *stained* with blood, and thereby acquiring a considerable variety of colors in different cases, the reasons of which variety I do not pretend to know,—rusty, pink, purple, dark yellow, or greenish,—all to be regarded as inflammatory; but the darker colored, or more opaque, being generally the indication of the more advanced stage of inflammation. The *crepitous râle* is in some cases very distinct and satisfactory, but in many it is unperceived, or if perceived is faint and of short duration in the early stage of the disease, while it may be of long standing in the advanced stage, and during the convalescence; and in some it is not so easily distinguished from the somewhat coarser sound of the subcrepitous râle, which may depend on conditions in the lungs, or minute branches of the bronchial, very different from inflammation. On these accounts, this symptom has never seemed to me to realize the very natural hopes of Laennec, as to its practi-

cal usefulness in detecting pneumonia, when not otherwise indicated.

The other indications that we have of peripneumony by auscultation and percussion—dullness on percussion, bronchial sound, respiration, or its complete suppression, and imperfect expansion of the affected side—are rather, in fact, what may be expected, and can hardly be distinguished from the effects of attendant pleurisy, so frequently complicating that disease.

In regard to all those physical or local symptoms of peripneumony, this observation, I am sure, we shall find practically important, that although we may rely much on them, particularly when grouped together, and watched in their progress, as indicating the *nature* of the disease, we cannot rely on them at all as indicating its *intensity*, its *probable tendency*, or the *extent* to which antiphlogistic remedies during it are demanded, or can be safely employed.

Take, for example, the pneumonic sputa,—they may be seen in full perfection in cases which are partial and slight, or which are attended with extreme debility, demanding stimulants; and may be absent in cases which are extensive and urgent, and will bear full evacuation. I remember having two young men—both previously in good health, and seen early—under my care at the same time, in pneumonia; in one of whom we had the translucent sputa almost from the first, exactly resembling red-current jelly, but he was so feeble that he became faint the first time I set him up to examine his chest; and although I thought it right to take some blood from him, he did not lose ten ounces, generally or locally. In the other, we never saw any tinge of blood in the sputa, but the other symptoms were well marked and urgent, and he bore four full general bleedings perfectly well; the blood was sizy, and the symptoms were relieved, as usual, after each bleeding. Both these patients recovered perfectly well; and judging by the progress of the cases,—especially as regards the state of the vital functions, the pulse, and breathing,—we had no reason to regret either that the first was so little, or the second so fully bled; but if we had trusted to the sputa as indicating the nature and intensity of the disease, we should have thought that the first demanded the full antiphlo-

gistic treatment, and the last little or none. And I have seen several in which the peripneumonic sputa were peculiarly well marked, which I have thought it necessary to treat, from the time I first saw them, (late in the disease), by stimuli only, and which have recovered remarkably well.

Again, as to the crepitous râle, I have seen many cases which seemed to me well marked by all the other symptoms, and which have done well, generally, under the antiphlogistic treatment, in which I never could detect that symptom; and others, in which I was quite satisfied of its existence and extension through the lungs, while the other symptoms have either continued so mild or been of such a nature that no active antiphlogistic practice has appeared to be demanded or justified by that extension, and the whole symptoms have subsided without them. Particularly since I read the statements of M. Louis, as to the extension of the crepitous râle through the lungs, notwithstanding full bleeding, by which the pulse had been brought down,—from which he inferred that the idea of the power of bloodletting over inflammation had been a mistake,—I have attended to this point, and satisfied myself that he was quite correct as to the fact, but wrong as to the inference,—I mean as a general principle; because, in these circumstances, when the pulse and breathing have decidedly improved, although the râle may indicate that the inflammation continues and extends for a time, we may be very confident that it will subside without further treatment. The reason, probably, is, that the inflammatory exudation, although extending, is modified in character, and so attenuated as to be easily reabsorbed,—so that no complete obstruction, or permanent disorganization of the pulmonary substance, to any injurious extent, is effected. In these circumstances, all that is required is, to watch the patient carefully and revert immediately to the bleeding, or other antiphlogistic treatment, if the breathing becomes again more oppressed, and the pulse more frequent and *firmer;* under the conviction, given by experience, that the crepitous râle extending through the lungs in a case of recent illness, and in connection with a frequent and full pulse, and a labored state of the

breathing, implies much danger, which may be averted by such treatment; but that the same râle extending through the lungs, in connection with a more natural pulse, and an easy state of the breathing, or with dyspnœa, but a feeble or soft pulse, and damp, livid skin, either implies no danger, and demands no active treatment, or is to be counteracted by very different remedies. And I may add, that this is exactly the line of conduct which our predecessors would have advised in those circumstances, before the crepitous râle was heard of, although they could not have spoken with so much precision as we can, of the nature of the changes then going on in the lungs.—*Edinburgh Monthly Journal*, from *Ranking's Abstract.*

Medicated Soaps for the Treatment of Skin Disease.—Sir H. Marsh uses the following prepartions in chronic forms of skin diseases:—

1. *Sulphur Soap.*—Take of

White Windsor Soap, 2 ounces;
Spirit of Wine, colored with alkanet root, 1 drachm.

Pound the soap in a mortar till all lumps have disappeared, add the spirit and beat into a paste, then add

Sulphur sublimed, 2 drachms;
Otto of rose, 10 drops;
Beat altogether.

2. *White Precipitate Soap*, as the above, substituting white precipitate for the sulphur.

3. *Red Precipitate Soap*, the same, substituting red precipitated mercury, 1 drachm.

4. *Corrosive Sublimate Soap*, the same, adding corrosive sublimate, 1 scruple.—*Dublin Med. Press.—Ib.*

Differential Diagnosis of Gastralgia and other more Serious Affections of the Stomach. By M. Valleix.—The diagnosis of gastralgia is often difficult; the slighter

forms may be mistaken for the slight gastric disturbance, called by the French, "*embarras gastrique*," or for acute gastritis; while the ordinary chronic forms may be mistaken for chronic gastritis, simple ulcer of the stomach, cancer of the stomach, or intercostal neuralgia.

The most important distinctive signs are thus given by Vallex:

GASTRALGIA—ACUTE FORM.	GASTRIC DISTURBANCE.
Acute pain in the epigastrium.	*Discomfort* rather than pain.
Appetite *preserved.*	*Anorexia.*
No headache.	*Headache* frequent.
Nausea *only after meals, or in the morning.*	Nausea frequent at *all periods of the day.*

GASTRALGIA—ACUTE FORM.	ACUTE GASTRITIS.
Appetite *good.*	Appetite *lost.*
No pain on pressure.	*Acute pain* on pressure.
Vomiting *rare, mucus* or of *food.*	*Bilious* vomiting *frequent.*
No fever.	*Distant fever.*

CHRONIC GASTRALGIA.	CHRONIC GASTRITIS.
Usually uncomplicated.	*Usually complicated* with another affection.
Vomiting *rare, mucus or food.*	*Bilious* vomiting frequent.
Spontaneous pains often *very acute.*	Spontaneous pains *less acute.*
Usually no pain on pressure.	*Pain* on pressure *acute.*
Progress of disease *irregular.*	Progress less irregular.
Absence of fever.	*Fever generally present.*

CHRONIC GASTRALGIA.	SIMPLE ULCER OF THE STOMACH.
Appetite *more or less preserved.*	Appetite *lost.*
Vomiting a *considerable period* after food.	Vomiting *immediately* after food.
No vomiting of pure blood or dark matter.	*Sometimes* vomiting of blood or black matter.
Progress *slow.*	Progress *rapid.*

CHRONIC GASTRALGIA.	CANCER OF THE STOMACH.
Vomiting as before.	Vomiting *at long periods after food.*
Destroys *slowly.*	Destroys *rapidly.*
No signs of cancerous cachexy.	*Signs* of cancerous cachexy.
Progress *irregular.*	Progress *regular.*
CHRONIC GASTRALGIA.	INTERCOSTAL NEURALGIA.
Pain *not increased by pressure.*	Pains *on pressure.*
Well marked gastric disturbance.	No gastric disturbance.

British and Foreign Medico-Chir. Review.—Ib.

Diagnostic Value of Epigastric Pains.—According to Wunderlich, ('Handbuch der Pathologie und Therapie,') the following points are worthy of attention, in reference to pains in the epigastric region:

Gastric pains in persons whose digestion and appetite are unaffected, and which are not exacerbated by hunger or food, most probably depend upon the spinal cord, or on some organ adjacent to the stomach. Pains which are diminished by strong pressure may be set down to neuralgia. Pains which are distinctly increased when the hand is placed gently on the stomach, but which are not proportionally aggravated by firm or abrupt pressure, are either imaginary or sympathetic. Pains continue for days or weeks, or recurring at definite periods without any obvious cause; also pains which come on suddenly with great severity and disappear as rapidly, are, probably, due to gastric neuralgia; they may depend on gaseous distention. Pains arising in the scrobiculus cordis and radiating in various directions, may arise from cardialgia, rheumatism of the abdominal wall, or peritonitis. Gastric pains, which are suspended by food, depend on neuralgic affection, or the presence of parasites. Pains which exist, both while ordinary food is taken and when fasting, but which disappear when stimulating food or drink is taken, depend on anemia of the stomach. Pains which are increased by the smallest quan-

tity of food, indicate probable gastritis or degeneration. If pains supervene an hour or two after meal time, we fear disease of the pylorus. [This assertion will needlessly alarm a large proportion of dyspeptics.—Ed.] Lancinatings are sometimes remarked in cancer.—*Ib.*

On Morbid Poisons. By John Simon, Esq., F. R. S., Surgeon to St. Thomas's Hospital, etc.—By *morbid poison* we understand a product, which is the supposed specific cause of certain specific diseases; of syphilis, for instance; of scarlatina, of typhus, of glanders, of small-pox, of hydrophobia, and the like;—a product, which has many striking differences from all other poisons, but chiefly these: first, that while other poisons (oxalic, or hydrocyanic acid, or sulphuretted hydrogen gas) act directly in proportion to their dose, becoming more or less deadly in proportion as more or less of them is brought to bear on the organism; you may observe, contrariwise, that the *morbid* poison (the poison of contagion) produces its characteristic results, when given in the minutest conceivable doses, just as surely, and just as deadly, as when the system is saturated with it:—and secondly, that while common poisons diminish from the body, or at the most remain stationary, during the production of their effects, morbid poisons apparently undergo, within the body on which they act, a striking and singular increase.

The phenomena which follow infection with a morbid poison consist of certain local changes, attended by a peculiar constitutional state. The *local* changes may be generalised as sub-acute inflammatory processes, attended (perhaps preceded) by the deposition of a *specific material*, which material in most cases contains an agent capable, by inoculation, of producing in another person the same symptoms as have attended its own generation in the original sufferer. The peculiar *constitutional* state is one essentially of depression; modified no doubt, and intermixed with those phenomena of reaction which the living body (like a spring) always opposes to the direct pressure of exterior influences.

Of the local charges, partaking of an inflammatory character, our memory can give many illustrations: such are seen in the pustules of small-pox; in the cynanche

and erythema, and kidney affection of scarlatina; in the intestinal ulcers of typhus; in the catarrh and eruption of measles; in the rupia or periostitis of syphilis; in the swollen parotid of mumps; in the dysentery of malarious fever; in suppurating tumors of glanders; and in various other symptoms that might be quoted.

And it is because of these local differences in *effect* that we are impelled to distinguish the *causes*, and to speak of them as *specific:* syphilis never produces ulcers in the ileum, scarlatina never causes iritis; the causative poison of the one disease differs from the causative poison of the other, for on the self-same subject it produces different effects.

[But there is probably a *material* in the system, or in the blood, upon which the morbid poison may act.]

What this material—the principle of infective disorders in the human subject—may originally have been, we are totally unable to say, but whatever may have been its first method of generation, we can now confidently speak of it as a possible product of the human body; we know that it is liable to develope itself out of some constituent of the human blood.

What are these constituents? Observation and argument sufficiently show, that the blood corpuscles and albumen can hardly be the constituents in question: first, because, after death by zymotic disease, they are found without evident alteration, and no considerable change in them could escape notice; secondly, because they are indispensable to life, and even their temporary transformation (if complete) would of necessity be fatal; thirdly, because immunity could never be attained by one attack of any particular disease, if it were requisite to exhaust these products: re-exposure to infection would ensure a return of the disease, and a reappearance of its phenomena.

For somewhat similar reasons, we may conclude, that the salts are not the elements concerned. Fibrine and the so-called extractive matters are what remain—can these be the ingredients in question? Substituting for the chemical phrase "extractive matters" the physiological one "waste of the tissues," I am strongly disposed to think an affirmative answer to that question; or, at all events, unhesitatingly to point here as the direction in

which accurate pathological investigation may be made with most prospect of success.

For, in the first place, they are matters already in progress of decay, and therefore eminently susceptible of new modification; in the second place, they are unessential to the nutritive processes, and that removal of them from the system, which would give immunity from re-infection, might be accomplished without withdrawing a vital ingredient from the blood; in the third place, only of such matters as these can it be said, that some of them occur but once in life. In infancy, in early age, and till puberty, there are certain waste materials which never afterwards occur; the temporary cartilages have to waste away, the thymus gland has to decay, peculiar changes referable to the sexual system have to be accomplished, and the effete products of these changes have to be eliminated from the system. And fourthly, notice that the surfaces and organs most prone to affection in the diseases in consideration are those which are eliminative and defecating; those whose normal products can hardly be retained for any time within the body, much less out of it, without undergoing a fœtid decomposition, which sufficiently stamps them with an excrementitious character. Bowels, skin, kidney, tonsils, are the favorite resorts of the several fever poisons, just as they are the surfaces by which naturally the organic waste of the several tissues is eliminated. And it may not be amiss to notice that, whereas the normal and healthy discharge of these substances commonly tends to occur in the highest attainable form of oxidation; and whereas, under a variety of atmospheric circumstances interfering with their efficient oxidation, they must tend to accumulate in forms more susceptible of fœted decomposition; so it is peculiarly under such circumstances—where ventilation is defective—where human beings are unduly crowded—where the air is loaded with de-oxidizing influences—that zymotic diseases tend to affect the system either through a new generation of their poison, or through some vast increase of susceptibility thus engendered.

On enquiry, it might appear that the relations of infective material to these natural products are definite and constant; that one—let us, for instance, say syphilis—would stand in the particular relation to fibrin; it would

be obvious that such an one would be of almost universal inoculativeness, and could only for a very short time, if at all, exhaust the patient's susceptibility to re-infection; and that a drug having certain relations to fibrin (mercury for example) would interfere with the affinities established by the disease. It might appear that another material, having its origin in the organic waste of nervous substance, would constitute the liability—say, to typhus; such an origin would almost fix the circumstances increasing our proneness to that disease, as well as prefigure the symptoms attending it. Of another material it might appear that it originates in the infantile decay of temporary cartilage, or of thymus, a decay occurring only once in life; that such material would constitute the susceptibility to measles or hooping-cough, a single attack of which commonly exhausts the patient's susceptibility for ever. Of a fourth material it might appear, that it arises in those changes of blood which attend the inflammatory and reparative processes, under direct atmospheric influence (as in open wounds, cutaneous or mucous,) and that in such a product would consist the humoral liability to erysipelatous infection, and to puerperal fever. I need not multiply these hypothetical cases, but, before leaving them, let me beg you to understand, that I employ them only as *illustrations;* that I do not adduce them as pictures of what occurs, only as diagrams explanatory of my meaning.

That the specific materials of the several morbid poisons, as they now pass daily under our notice, constituting the principles of zymotic infection, are either actually derived from the blood, or might have been thus derived, is quite a certainty. Whether each of them, in its first and original derivation, was a native ingredient of the blood, identical with that on which we now see its influence exerted; and whether its first conversion into a specific *materies morbi* occurred without exterior infection, are points which cannot be decided with confidence. In respect of many infected diseases, however, this view of their having first of all arisen spontaneously, would seem consistent with analogy. Experience confirms this theoretical view; for we not unfrequently hear of an outbreak of small-pox or scarlatina, where no communication can be traced with a person previously infected; and we con-

stantly have cases of typhus arising sporadically, where we may fairly consider the patient to have originated the disease within the limits of his own organization.

It is too much the custom to speak of the personal predisposition to infective disorders, as though it consisted in a condition of mere debility. There is no foundation for this view. If we examine cases of pure debility—such as occur under the influence of extreme inanition, or after severe injuries with loss of blood, or towards the close of chronic exhaustive disorders, we do not find in them any marked liability to the infection of morbid poisons generally. In hospital practice, for instance, we do not find that typhus or erysipelas propagates itself among the patients of a ward in proportion to their weakness. It cannot be too distinctly understood that the predispositions to these various disorders are themselves as various as the disorders, and consist in specific conditions of blood, hitherto very imperfectly explored. Mere debility, as such, has nothing directly to do with the matter: a person is liable to the infection of small-pox, because he has one matter in his blood; to that of measles, because he has another; to that of typhus, because he has a third; to that of scarlatina, because he has a fourth, and so on. A predisposition to one of these disorders is by no means necessarily, and possibly not at all, a predisposition to any other of the class. As regards the exterior circumstances which are considered predisponent to infection, I apprehend there can be little question that their mode of operation must for the most part be indirect: that overcrowding and defective ventilation will increase the liability to small-pox or scarlatina only so far as they hinder a natural elimination from the blood of those materials which constitute the liability to the disease, or as they maintain those materials in a state of imperfect oxidation favorable to the zymotic change. In examining the habitations of the poorest classes in our large cities, we find the atmosphere highly animalised—often fetid with organic matters: the air is so little changed, that it stinks with the volatile excretions of the many human beings crowded together; and to these contaminations are very generally added products of decomposition arising from their other secretions, which lie in cesspools, or have soaked into the soil beneath and around their dwellings. Such an atmos-

phere can do little towards purifying the blood of matters wherewith itself is already so loaded: the effete matters of the organism, which naturally seek their elimination in an oxidised state, and which for the healthiest elimination ought probably to be in a high degree of oxidation, are here debarred from completing their discharge in its most normal form: and the inhabitants of such localities are consequently maintained artificially, replete with those humoral products which constitute the predisposition to zymotic blood-diseases. It is in these localities, if at all, that such diseases originate *de novo*. I entertain no doubt that some of them do thus originate: though I am unable to state what it is which gives the requisite impetus, or why it is given with one disease oftener than with another. Typhus appears so frequently to arise in this manner, and the predisposition to it so intimately associated with local circumstances, that some writers have been disposed to overlook the unquestionable evidence that exists of the re-production and multiplication of the poison in the person of the sufferer, and have inclined to consider it an enchorial disease, incommunicable by personal intercourse.

With respect to other alleged predisponent causes, I incline still more strongly to the view already expressed in regard of atmospheric influences, that they can operate only indirectly, only by means of those specific blood-products which constitute the true predisposition in each case. If fatigue predisposes to a particular infection, it can hardly be for any other reason than that the fatigued organ furnishes the material permissive of infection. If errors or insufficiencies of diet, or certain courses of medicine should be found to form a predisposition to certain infectible disorders, their mode of operation could scarcely be otherwise, than by increasing the formation, or diminishing the discharge of that blood product, which is the immediate object of attack to the zymotic poison.

Therefore, as respects those instances of human morbid infection with which we are best acquainted, we may recapitulate our facts, and state our theory, in the following terms: that certain materials of the blood—materials not essential to the performance of its nutritive functions, are, by certain circumstances, rendered liable to undergo definite and specific changes; under the influence of which

they become determined, with increased rapidity, to the outlets of the body; and irritate these outlets in their passage; that these changes continue, until the materials affected by them are completely exhausted from the blood; and that the severity and duration of those changes is in proportion to the quantity of material seeking elimination: that the new matters engendered and evolved under these circumstances are capable in various ways, and with more or less certainty, of producing a precisely similar succession of changes in the blood of another individual, or of any number of individuals: operating always on some of the ingredients of the blood as that whence themselves arose, and determining it to the same outlets as that whither themselves were determined; so that the choice of material in the blood, and the choice of outlet in the body, constitute specific characters for the several morbid poisons distinctively, and so that the final products act always as special catalytics for that original material of the blood, wheresoever they may encounter it. But, finally, that under certain possible conditions of accumulation, or tension, in that original material, other circumstances may serve to start it in its progress of specific decomposition, without any demonstrable influence from that exterior catalytic, which is the ordinary occasion of its change.

From our foregone analysis of the pathology of morbid poisons, it is not difficult to deduce philosophical principles of treatment, or to devise a rational explanation of such success and such failure as medicine has hitherto encountered in this department of its ministrations. To check the further conversion of material into blood; to destroy the poison, or to turn it into harmless combinations; to aid or to anticipate the eliminative efforts of the disease; these would be the indications which pathology would suggest, and these have already, in great part, attained the sanction of experience. But both pathology and practice would concur in adding to these principles another, which, in our present age of palliative medicine, admits of almost infinite application; to remember (namely) that in each zymotic disease, nature is proceeding in her own way towards a curative termination, and that where (as too commonly happens) we are incompetent to conquer the disease by direct neutralizing antidotes, it

behoves us chiefly to devote ourselves to the humbler task of moderating local phenomena, and sustaining constitutional power. Thus it is, that in a vast number of perilous infections, we are able to assist nature through her difficult process of cure, by no other treatment than the judicious administration of natural dietetic tonics—food and wine. Thus it is, that while we recognise the absolute efficacy of mercury against the poison of primary syphilis, we constantly find ourselves without an antidote against its later combinations, and confidently rely on measures adopted, without reference to the specific nature of the disease, solely on the ground of their general invigorating power. Till you can neutralise the poison of typhus, of erysipelas, of scarlatina within the blood of your patients, as you would neutralise an acid or an alkali in a test-tube, never lose sight of this important principle; never forget that these morbid poisons are eminently depressive to life; that they tend to kill by shock and debilitation.

And finally, see what vaccination has done for one of them, perhaps, formerly the most malignant and unsparing. I have taken pains to explain to you the pathology of its preventive power, and very little reflection on the argument of this lecture will convince you that there is, in the nature of things, no reason why small-pox alone should be frustrated in its tendency—no reason why each zymotic disease should not have its own preventive catalytic—no reason why, in connexion with these other pestilences, other men's names should not hereafter be remembered as gratefully and as gloriously as Jenner's in relation to small-pox. Our resources for this great purpose of preventive medicine are not restricted to the teats of cattle. We have the pharmacopœia before us, many of its articles acting catalytically on the blood, and determining products of decomposition, in a characteristic way, to a specific plurality of organs. Not only is there no reason against the possibility that many of these medicinal catalyses may be preventive of the zymotic catalyses; but there is every reason for such a possibility. To give you an illustration, why should not belladonna (determining the products of its operation to the throat, the kidneys, and the skin) act as a medicinal catalytic of that material which constitutes the susceptibility to scarlatina, and thus,

in recognised reality (as heretofore in vague tradition) be preventive of that disease? Again, why should not the direct counteractive influence of drugs be extended in respect of these diseases, when they already are in attack? Why should we not be enabled by one drug to arrest the blood-change of typhus, and by another that of plague or glanders, just as with quinine we render the blood insusceptible of further detriment from the malarious poison.—*Lancet*, from *Braithwaite's Retrospect.*

Treatment of Habitual Constipation. By Dr. J. C. Warren.—The treatment of chronic costiveness, an ailment so common in persons who lead sedentary lives, may be either medicinal or alimentary. Of medicines, Dr. Warren employs but three, aloes, magnesia, and senna-wine. He considers that the bitter principle of *aloes* renders it in some measure a substitute for the deficient bile, and a few grains of the powder or gum forms a mild and effectual aperient. The watery extract (5 to 10 grains), combined with an aromatic oil, is one of the mildest of laxatives, taken fasting. Aperients should not be taken at night, when they become buried in the alimentary mass, and ineffectual, or in their action disturb the repose of patients of an irritable temperament; but when the stomach is empty, either before dinner or breakfast. *Magnesia*, however, is so mild an aperient, that even if taken at night, it does not disturb sleep, and, from its combining with the acids which have been generated during the day, is then even more likely to be useful. When the stomach is not acid, half an orange aids its action. *Senna-wine*, prepared according to Dr. Lane's process, is a very satisfactory aperient, the dose being from ½oz. to 2oz., and as it is slightly stimulant, it may be taken for an oppressed stomach at night. If taken in the morning it should be diluted with equal parts of water.

Among the *alimentary* substances which tend to relieve constipation in some persons, fruit is the most agreeable; but for this end it should be taken before meals, when the stomach is empty—its employment after a full meal

often giving rise to acetous fermentation and consequent disorders. Laxative vegetables are not usually easily digested by persons of weak stomachs, in whom they cause distressing flatulence. In other subjects they may act very beneficially. The costiveness which occurs after weaning is removed by a slightly sweetened infusion of cranberries. Some persons find advantage in drinking a glass of cold water, others a cup of strong coffee, early in the morning. Animal food is rather laxative than not, especially the fatty portions which, however, delicate stomachs cannot manage. Some people take much wine, believing it acts on the bowels. If it does so, it is from the mere weight of the fluid, or perhaps from its causing a toxical effect, when the bowels take on a conservative eliminatory action. Most wines and spirits, taken in moderate quantities, adstrict the bowels.

Fine flour is highly nutritious; and if exclusively used, like other nutritious substances, as jelly, arrow-root, milk, etc., causes costiveness. The artificial separation of the covering of the corn is counteractive of the intentions of nature, this stimulating the intestine to expulsive action. After employing, with great advantage, bread containing the *bran* in his own family, and recommending it to numbers of others, the author was induced to try a still coarser preparation. Wheat was ground in a coffee-mill, and then boiled with a succession of water and a little salt, for three or four hours. This Dr. Warren has found incalculably *the best and pleasantest remedy for constipation*, effecting quite a revolution in the economy and health, when taken in sufficient quantites (12oz.), either as a part or whole of the breakfast, or instead of pudding and vegetables at dinner. When the stomach will bear sweet substances, honey, molasses, etc., may be added with advantage. A moderate degree of fluidity, i. e., less than that of boiled rice or hominy, increases the laxative power. The wheat acts in part by its mere bulk, and probably in part by reason of the stimulating effect of the particles of bran.—*Am. Jour. Med. Sci.*

Uses of the Nitro-Muriatic Acid Bath. By Ranald Martin, Esq.—Mr. Martin, in some valuable papers on tropical diseases, gives the following directions for the preparation and use of the acid bath:

Take of hydrochloric acid, three parts; nitric acid, two parts; distilled water, five parts, mix carefully.

1. Of this dilute nitro-muriatic acid, three ounces by measure are to be added to each gallon of water, to form the bath.

2. Two gallons of water may suffice for an ordinary foot-bath.

3. The bath thus prepared will keep in use for a week, by adding to it, once every day, half an ounce of the dilute acid, and a pint of water, in order to make up for waste in evaporation.

4. A portion only of the bath is to be heated for use, after which it is to be added to the remainder, so as to make the whole of from 96° to 98°.

5. Let both feet be placed in the bath, while the inside of the legs and thighs, the right side over the liver, and the inside of both arms, are sponged alternately; or let the abdomen be swathed in flannel soaked in the bath. This should be continued for fifteen minutes, morning and evening.

6. While using the bath, a gentle aperient, as Cheltenham or Epsom salts, in some bitter infusion, should be taken every other morning; and, should there be dryness or harshness of the skin, a warm vapor-bath, used twice a week, will be found of much service in stimulating and opening the pores, and in purifying the surface of the body.

7. In urgent cases, a general bath to envelope the whole body should be used, the proportions of the dilute acid and water being continued as above stated.

8. Earthen or wooden vessels should be used for the baths, and the sponges and towels kept in cold water, lest the acid corrode them.

9. The acid mixture forming the bath should be heated in earthenware vessels—large pipkins for instance. When used, the temperature should be measured by the thermometer, at 96° and 98°, as the body will be chill-

ed by a degree of warmth that feels comfortable to the hand.

10. When a general bath is used for the whole body, the patient, before going into the bath, should be covered over with blankets, until a gentle perspiration is induced.

11. When in the bath, a covering blanket should be drawn over the shoulders, and up to the chin, to confine the steam, and a night-cap should be worn to protect the head from the steam.

12. Before quitting the bath, the bed, drawers, and towels should be warmed and ready; the body to be dried while standing in the bath, and the dressing to be performed immediately.

13. When the acid-bath excites much irritation of the skin, the quantity of dilute nitro-muriatic acid may be diminished; and when irritation of the gums, with general malaise, occurs, the use of the bath should be relinquished for a time, resuming its application, if necessary, when the above symptoms have subsided.

Mr. Martin states that a course of two months of this bath is found generally to restore the healthy action of the liver; nor does it interfere with the use of bitter tonics, or even with mild chalybeates, but, on the contrary, it rather gives effect to their operations. In the severer instances he has continually to use this means for a much longer period. In treating torpor of the liver, he recommends warm and tepid baths, and especially those of sea-water, in aid of other medical treatment, reducing the temperature as the patient approaches health, and after the cessation of other means of cure.

The neglect of the nitro-muriatic acid treatment in cases of the nature here treated of, and in which mercury in every form, proves not only insufficient but pernicious, is much to be regretted.

A valuable quality of the nitro-muriatic acid is, that whether exhibited internally or externally, its influence in promoting the secretions is not in the least degree counteracted by opium, even when exhibited in the largest doses. We obtain, in short, from the use of the mineral acids in the treatment of chronic disease, all the remedial aids which can be obtained from mercury in the treatment of acute disease; and that, without any of

the injurious consequences that so frequently ensue from the exhibition of the last named agent. Persons of anemic or of scrofulous habit are liable to serious injury from the use of mercury, whether given in large doses, during a few days, or in alterative doses during weeks or months. It is quite otherwise in respect to the acids, the most marked and lasting improvement of the general health being the ordinary result of their exhibition.—*Lancet and Prov. Med. and Surg. Jour.—Ib.*

On the Symptomatological Value of Palpitation. By Dr. O. B. Bellingham.—Dr. Bellingham thus contrasts palpitation arising from organic disease of the heart, and that independent of it.

Palpitation depending upon Organic Disease of the Heart.	*Palpitation independent of Organic Disease of the Heart.*
1. More common in the male than the female.	1. More common in the female than the male.
2. Palpitation usually comes on slowly and gradually.	2. Palpitation usually sets in suddenly.
3. Palpitation constant, though more marked at one period than at another.	3. Palpitation not constant, having perfect intermissions.
4. Impulse usually stronger than natural; sometimes remarkably increased, heaving, and prolonged; at others irregular and unequal.	4. Impulse neither heaving nor prolonged; often abrupt, knocking, and circumscribed, and accompanied by a fluttering sensation in the præcordial region or epigastrium.
5. Percussion elicits a dull sound over an increased surface, and the degree of dullness is greater than natural.	5. The extent of surface in the region of the heart, which yields naturally a dull sound on percussion, is not increased.

6. Palpitation often accompanied by the auscultatory signs of the diseased valves.	6. Auscultatory signs of diseased valves are absent; bruit de soufflet often present in the large arteries, and a continuous murmur in the veins.
7. Action of the heart, regular, irregular, or intermittent; not necessarily quickened.	7. Rhythm of heart usually regular; sometimes intermittent; its action generally more rapid than natural.
8. Palpitation often not much complained of by the patient; occasionally attended by severe pain, extending to the left shoulder and arm.	8. Palpitation often much complained of by the patient; more readily induced by mental emotion, and frequently accompanied by pain in the left side.
9. Lips and cheeks often livid; countenance congested; anasarca of lower extremeties common.	9. Lips and cheeks never livid; countenance often chlorotic; anasarca absent, except in extreme cases.
10. Palpitation increased by exercise, by stimulants and tonics, etc.; relieved by rest, and frequently also by local or general bleeding, and an antiphlogistic regimen.	10. Palpitation increased by sedentary occupations; by local and general bleeding, etc.; relieved by moderate exercise, and by stimulants or tonics, particularly the preparations of iron.

[The influence of the coronary circulation in producing palpitation is much insisted on by the author. He says:]

In considering the immediate cause of palpitation, writers do not appear to me to have taken sufficiently into account the coronary circulation, although there can be no doubt that it performs an important part, and that derangement of its circulation will be followed by derangement of the functions of the heart equally as when the circulation through the chambers of the organ is impeded or deranged.

The integrity of a muscle in its healthy action, depends mainly, we know, upon its receiving a due supply of arterial blood; if this is sufficient, and of a good quality,

the functions of the muscle will be performed with vigor; while, if the supply is too small, or if its quality is deteriorated, the functions of the muscle will be impaired. Now, the heart being a muscular viscus, requires, for the vigorous performance of its functions, an efficient supply of arterial blood: hence, although the blood which circulates through the chambers of the heart is the ordinary stimulus to the contractions of the organ, if the coronary arteries which convey the materials for its nutrition carry it in sufficient quantity, or of a deteriorated quality; or if, on the other hand, it is conveyed in increased quantity, or is of too stimulating a quality, the functions of the organ will suffer.

Thus, in anæmia, the quality of the blood being deteriorated, and a given amount containing less of the materials of nutrition, it is necessary that a greater quantity should pass through the coronary vessels in a given period, and the action of the organ is accelerated in order to compensate for the deficiency. Again, in states of plethora, where blood is rapidly formed, the heart is excited to increased action, very probably in consequence of the stimulant nature of the blood which circulates in its vessels, and its increased amount.

Lastly, in cases of valvular or other disease of the heart, where considerable obstruction exists in the pulmonary circulation, and the venous blood does not undergo the necessary changes in the lungs, the coronary arteries will convey a mixture of venous and arterial blood to the tissue of the heart; the functions of the muscle become impaired, its irritability diminishes, and it is no longer obedient to the stimulus of the blood which distends its cavities: hence its action becomes irregular and unequal; indeed, in the advanced stage of valvular or other disease of the heart where the pulmonary circulation is greatly impeded, the cessation of the heart's action, and the death of the individual, is probably owing immediately, in many cases, to the coronary arteries conveying venous blood to the tissue of the heart.

Before dismissing the subject of palpitation, I may observe, that this symptom frequently is present in a marked degree in the class of patients who present themselves at hospital, without their appearing to be conscious of it. When questioned, they allow that they feel some oppres-

sion in the præcordial region, but hardly admit that it amounts to palpitation, though, when we come to examine the chest, the action of the heart is often much increased, and its impulse sometimes so strong as to raise the head of the observer. This, no doubt, arises in some measure from the sensibility being blunted by the ill oxygenation of the blood, and in some measure, also, from the parts having had time to accommodate themselves to their altered condition. On the other hand, it is no less remarkable how often, when palpitation depends simply upon functional derangement, the patient's attention is directed mainly to it; he is most unhappy in consequence, and can scarcely be made to believe that he is not the subject of organic, and, therefore, in his opinion, of incurable disease of the heart.—*Medical Gazette.*

Dislocation of Femur reduced on sixty-eighth day, by Jarvis's Surgical Adjuster. By Dr. Josiah Crosby, of Manchester, U. S.—On the 16th of January, 1849, Mr. P—, æt. 56, muscular, weighing about 180 pounds, of intemperate habits, was thrown from a sleigh, and dislocated his left hip. Six weeks passed before the nature of the injury was understood, and more than three weeks afterwards before any attempt was made to reduce it.

On the sixty-eighth day of the dislocation the author saw the patient for the first time—found him lying in bed with all the diagnostic signs of dislocation of the head of the femur upwards and backwards; limb below the natural temperature, purple, œdematous, and shortened from three to four inches. Although the case seemed almost hopeless, it was agreed that an effort at reduction should be made, and *Jarvis's Adjuster* was accordingly applied. Before extension was commenced, an attempt was made to bring the patient under the influence of chloroform, but it was soon abandoned on account of violent spasms which were produced by it, and the operation was done without the aid of this powerful agent. The extension was continued, gradually increasing the power for nearly twenty-four hours, when by a little rotation of the limb, the head of the bone was brought into the socket with a snap audible to the bystanders.

The hand of an assistant was placed on the trochanter while flexion and slight rotation were given to the limb, to see if the leg would remain at full length and in the right position. Everything proving satisfactory, the patient was laid in bed, and a bandage applied about the hips to guard against accidents from motion.

Dr. C. remarked that in the Report on Surgery to the National Medical Association for 1849, the chairman of that committee gives an unfavorable opinion for himself and Prof. Pope of the St. Louis University, in regard to the "Adjuster," but that no statistics were given on which this opinion is founded. He was of opinion that an instrument of so much power and of so varied application deserves a fair trial, and that by this test its character should be fixed.—*Ranking's Abstract.*

The Kousso—a New Anthelmintic. By Jonathan Pereira, M. D., F. R. S.—The Kousso, or Brayera Anthelmintica, is an Abyssinian tree twenty feet high. Branches round, rusty, tomentose-villose, marked by the annular cicatrices of the fallen leaves. Leaves crowded, alternate, interruptedly imparipinnate and sheathing at the base. Leaflets oblong, or elliptical lanceolate, acute, serrate, villose at the margin and on the nerves of the under surface. Stipules adnate to the petoile, which is dilated at the base and amplexicaul. Flowers diœcious, small, greenish, and becoming purple; repeatedly dichotomous; the pedicels with an ovate bract at the base.

The so-called male flowers may be regarded as hermaphrodite flowers, inasmuch as the carpels are well developed. The female flowers are somewhat different in their structure. The outer segments of the calyx are much more developed than in the female flowers, and are four or five times larger than those of the inner row, and are placed somewhat below them; the petals are entirely wanting; the stamina are rudimentary and sterile. The ripe fruits are unknown.

The tree grows in Tigre, Agame, and Shoa; it is cultivated everywhere, and Dr. Beke writes that the tree is "found throughout the entire table-land of North-Eastern

Abyssinia, but appears to require an elevation of upwards of six thousand (perhaps of seven thousand) feet for its growth. Where I found it most luxuriant was in the vicinity of the source of the river Abai (Bruce's Nile,) at an elevation of close upon nine thousand feet. Tigre, the northern portion of Abyssinia, being, on the whole, of lower elevation than the rest of that country, the tree is only found there in a few places."

Bruce describes the flowers as being of a greenish color, tinged with purple, and when fully blown, of a deep red or purple. The petals, he says, are white.

Preparation.—Mr. Johnston states that the kousso is gathered for medicinal purposes before the seeds are quite ripe, whilst still a number of florets remain unchanged. The bunches are suspended in the sun to dry, and if not required for immediate use are deposited in a jar.

Pharmacography.—The author has seen only one package of kousso; this was kindly opened in his presence by M. Simond, of the firm of Caylits, Simond & Co., the agents of M. Rochet d'Hericourt. It was a deal box containing about 30 lbs. of the dried flowers, wrapped up in a large skin of red leather. On removing the lid of the box and untying the leather package, the fragrant or balsamic odor of the dried flowers was very powerful. It appeared to him to be somewhat similar to the combined odors of tea, hops, and senna leaves. The flowers had apparently undergone no preparation beyond that of desiccation. The bunches of flowers were perfect and unbroken, though of course compressed. The general color of the dried mass was greenish-yellow; but when the flowers were more closely examined, the edges of the petals were seen to have a reddish or purplish color. The taste of the dried flowers is at first not very marked, but after a few minutes a feeble, senna-like, acrid, unpleasant taste becomes perceptible. By soaking the dried flowers in water, they may be unfolded sufficiently to determine their botanical characters which have been already described. When submitted to microscopic examination, the hairs are perceived to be simple lymphatic hairs, tapering at the distal extremity. In Abyssinia, two sorts of kousso are distinguished, viz., first, the *red* kousso produced by the female flowers; secondly, the male flowers

known as *kousso esels.* In commerce the two sorts are always mixed together.

Adulteration.—Considering the enormous price (about 1*l.* 15*s.* per ounce) at which kousso has hitherto been sold in Paris, and the very limited quantity originally supplied by M. Rochet d'Hericourt, it cannot be surprising that the article should be extensively adulterated. Indeed, the author has been assured, on credible authority, that the powder now selling as kousso is, in fact, the powder of pomegranate bark, and that legal proceedings have been commenced in Paris to put a stop to the fraud, which is well calculated to injure the reputation of the genuine Abyssinian remedy. He has no doubt but that the microscope would readily detect the substitution; but the surest way of obtaining the genuine article is, to purchase the dried flowers in the entire state, not in the form of powder.

Although it is not improbable that the anthelmintic property of kousso may in part depend on tannin (since the pomegranate bark, which contains this principle in abundance, is, like kousso, also an anthelmintic,) yet what may be termed the peculiar property of the kousso probably resides chiefly in the bitter acrid resin. This is soluble in alcohol and in ether, and appears to be a neutral body, manifesting neither distinct alkaline nor acid properties.

By boiling the dried plant in water a fragrant odor is evolved. No doubt this, as well as the odor of the dried plant itself, depends on the presence of a *volatile oil*, of which, however, no mention is made in Wittstein's analysis, the oil being present in too small a quantity to admit of its collection when small quantities of the flowers are operated on. It is not improbable that the anthelmintic properties may, in part, depend on this oil; for Schimper states, that in Abyssinia the plant is considered to have lost its anthelmintic powers in the third year after its collection. In Europe, however, it retains its powers for a longer period (on account of the cooler climate?) for the flowers which have been used for all the recent experiments have been collected more than four years, and we are told in the shop-bill of a Parisian pharmacien, that they may be kept for an indefinite period.

An infusion or a decoction of kousso strikes a dark green olive tint with a solution of the sesqui-chloride of iron.

Medicinal Properties.—Neither botanical characters, sensible qualities, nor chemical composition, would have induced us to suspect that kousso possesses the valuable anthelmintic properties which experience has shown that it does. The general and prevailing quality of the rosaceæ is astringency, dependent on the presence of tannic and gallic acids. This is observed in the flowers (*e.g.* rose-petals) as well as in other parts of the plants. In this quality kousso agrees with its congeners. But it can scarcely be on this that its vermifuge property solely depends; otherwise the rose-petals, or other equally powerful astringent, would be as effective in expelling worms as the Abyssinian flowers. But in rosaceæ, as in many other families of the vegetable kingdom, anomalies exist, and to this head we must, for the present, be content to refer kousso.

Our confidence in the anthelmintic properties of kousso rests, then, on experience only: and the evidence on this point is very strong. All modern travellers in Abyssinia are agreed on the great success of the remedy on the natives of that country; and the experience of physicians in France, England, Germany, and Switzerland, confirms the favorable reports made by those who have seen the kousso used in its native country.

In Paris it has been employed with great success by Chomel and Sandras, as well as by numerous other distinguished physicians. In London, our experience of it is much more limited; but the successful results of its use in King's College Hospital, in the hands of Drs. Budd and Todd, and of Dr. Gull, in Guy's Hospital, confirm the favorable reports of its efficacy which had reached this country from abroad.

The physiological effects of kousso are not in general very great. Sometimes it excites a slight sensation of heat, nausea, or even vomiting, creates thirst, and frequently, perhaps usually, a gentle action on the bowels. But the latter is commonly so slight, that in a considerable number of cases it is necessary to follow its administration by a mild purgative. It is obvious, therefore, that the efficacy of kousso as an anthelmintic does not depend

on its purgative or evacuant influence, but on its poisonous or toxic action on the worm; in fact, it is a true *vermicide.* In one case, that of a woman in France, it brought away ten worms, of which one only manifested evidences of vitality, and that for a few minutes only.

Kousso appears to be an effective anthelmintic in both kinds of tape-worm; viz., the *tænia solium* and *bothriocephalus latus.* In most of the reported successful cases, the *tænia solium* was the parasite expelled; but in one of Chomel's cases, the worm which was evacuated was the *bothriocephalus latus*, and the author is informed, that kousso has proved most effectual in Switzerland, where, as is well known, the *bothriocephalus* is the prevailing tape-worm.

The dealers in kousso assert that one dose will, in every case, effect the radical cure of the tape-worm. But this must be obviously an error. Even supposing that it invariably destroys all the worms in the alimentary canal at the time of its exhibition, it can in no way prevent their recurrence, provided the patient retains his predisposition, which there is no reason to suppose is affected by the kousso, and is subjected to the same influence. It certainly does not radically cure the Abyssinians: since, as several writers tell us, they resort to this remedy monthly. Schimper, the governor of Adoa, says it does not completely expel the tænia, or at least rarely does so. But he adds, that possibly in Europeans, in whom the verminous disposition is not so pronounced as in the Abyssynians, it may perhaps act in a more complete manner. In the Abyssinians this verminous disposition is innate, and is dependent, he adds, on the regimen which they adopt.

Hitherto the great drawback to the use of kousso has been the difficulty of procuring the remedy, and its enormous cost. At the time when it could be purchased in Paris, its price was 1*l.* 15*s.* per ounce, or 17*s.* 6*d.* per dose. M. Rochet d'Hericourt, the sole holder of the medicine at the present time, refuses to sell any quantity less than his entire stock, at the rate of one guinea per ounce. His nephew tells me that his uncle possesses 1400 lbs of it, which, at one guinea per ounce, will cost 22,400 guineas. The impossibility of effecting a sale on such terms will, the author doubts not, ultimately compel the holder to re-

duce his demands to something approaching to reason. It does not appear that the remedy is very costly in Abyssinia. Schimper, in writing from Adoa, in Abyssinia, says that it is found in commerce at a very low price. At Yangaro (commonly called Zingaro) the sovereign has the exclusive use of it, his subjects being prohibited from employing it; but in other parts free trade in kousso is permitted. Considering the frequency and rapidity of our communications with Egypt, to which place, according to Dr. Brayer, kousso is conveyed by caravans, no difficulty, the author apprehends, will be experienced in obtaining an abundant supply of it. Its present price is a virtual prohibition of its use.

The flavor, though not very strong, is by no means agreeable; and is sufficiently powerful in some patients to create disgust and excite vomiting. In one case, under M. Chomel, the whole of the remedy was rejected by vomiting. No ill effects have resulted from its use in this country, nor has the author met with any statement of its injurious action, except in Mr. Johnson's "Travels in Southern Abyssinia," where it is stated that its "operation is speedy and effectual; and to judge by the prostration of strength it occasioned in my servants when they employed this medicine, it must be dreadfully severe. I can answer for this, that it occasions frequent miscarriages, often fatal to the mother, and even men have been known, after a large dose, to have died the same day from its consequences. I am, therefore, surprised at the noise which this remedy has occasioned the last few years in Europe, as if it promised to be a valuable addition to our materia medica. This, I conceive, can never be; for no civilized stomach could bear the bulk of the drug necessary to produce its effects. Even in Abyssinia it is but barely tolerated; and let another remedy equally efficacious for dislodging tape-worm be introduced into that country, and the use of kousso will be soon abandoned. In fact, several other vegetable productions are now employed to escape the punishment of a dose of this violent cathartic."

Administration.—Both Bruce and Schimper tell us that the Abyssinians take a handful of the dried flowers as a dose. In Paris the dose has varied from four to six drachms. In general, however, half an ounce (troy

weight) is considered a dose for an adult. For different ages the doses are thus adjusted:

Adults	1 dose		=240 grs. (½ oz.)
Children from 7 to 12 years	⅔ of a dose		=160 "
" " 3 to 7 "	½	"	=120 "
" not exceeding 3 "	⅓	"	= 80 "

The kousso should be taken in the morning fasting. The only preparation necessary is, that the last meal of the preceding evening should be slight. The evacuation of the bowels by a mild purgative or a lavement is also desirable. The mode of administering the remedy is as follows:—the powdered flowers are to be mixed with lukewarm water, for an adult about ten ounces, and allowed to infuse for a quarter of an hour. A little lemon juice is then to be swallowed, and the infusion being stirred up, the whole is taken, liquid and powder, at two or three draughts, at short intervals, being washed down by cold water and lemon-juice. To promote the operation, tea, without sugar or milk, may be taken. In three or four hours, if the remedy has not operated, a dose of castor oil, or a saline purgative, should be administered.—*Dublin Med. Press and Pharmaceutical Journal*, from *Ranking's Abstract.*

Clinical Lecture on the Kousso.—[Dr. Budd having obtained a supply of this medicine, tested its properties in several cases, upon which he subsequently made the following comments:]

The medicine has been given in the morning, before breakfast, which is the best time for administering all remedies for tape-worm, as the small intestine which the worm inhabits is then more empty than at other times; the worm, consequently, less likely to be sheathed, and protected from the action of the drug, by the other contents of the bowel.

The powder has been infused for ten minutes in three-fourths of a pint of hot water. The infusion has then been stirred, and the whole drunk.

One of the patients, under the care of Dr. Todd, a wo-

man advanced in pregnancy, vomited about half of the dose; but what remained in the stomach destroyed the worm. Two of the other patients had a slight feeling of nausea for ten minutes or a quarter of an hour, after taking the medicine. Another was several times purged by it; another, the woman to whom we first gave it, had headache after taking it, and ascribed to it a diuretic effect. The rest felt no uneasy sensation whatever from the medicine.

In the cases that fell under my own care, I ordered the patients to live sparingly, and to take a seidlitz powder, or a dose of castor oil, the day before taking the kousso, for the sake of emptying the bowels, and so leaving the worm more exposed. This is a precaution which it is well to take before administering any of the remedies for tape-worm. They all act directly on the worm, and to take effect must, of course, be brought in contact with it.

I also ordered the patients to take a seidlitz powder, or a dose of castor-oil, after the kousso, to carry the medicine down to the worm, and to expel the dead or enfeebled worm from the bowels. This expedient, also, is equally applicable to other remedies for the tape-worm, and especially to turpentine, which, if it remains long in the stomach, or passes slowly through the bowels, gets absorbed and irritates the kidneys and bladder, producing strangury and bloody urine, and may not reach the worm in quantity sufficient to kill it.

Tape-worms are very tenacious of life. They are seldom voided entire without the aid of medicines that act especially upon them. Single joints often come away, and pieces two or three feet long are now and then voided, but it very seldom happens, unless after medicine, that a portion comprising the head is thus passed. This portion remains and grows again, so that a person is often plagued with the parasite for years. One of our patients, Sarah W——, had been so plagued for sixteen years, during which she told us that she had seldom gone a week without passing joints of the worm. She had taken turpentine, and the bark of the pomegranate root, and some years ago, when she was at Fort Beaufort, at the Cape of Good Hope, she took the root of a plant used by the natives as a remedy for tape-worm, which she says is called there "Cacay." She describes this root as being round, and, when scraped, white, like a turnip, and sweet to the

taste. This medicine had very little effect. The turpentine and the pomegranate brought away long pieces of the worm, but the head and the portion near it remained, and the worm grew again. The worm was expelled after the kousso in different portions, on the 11th and 12th of April, and she has since had none of the symptoms which she attributed to it. She is still (May 31st) in the hospital, for prolapsus of the uterus, which she had long had, but she feels convinced that the worm is entirely destroyed.

Another case, that shows more strikingly still the tenacity of life of the tape-worm, is that of Samuel P——. He first passed joints of the worm seven years ago. In September last, he was brought into the hospital with cholera, and on the day of his admission passed a portion of the worm two yards in length. He remained in the hospital three weeks, on account of the cholera. Some time after this, he again passed joints of the worm, and to get rid of it came to the hospital as an out-patient. Turpentine and castor-oil were given him, and brought away a long piece of the worm. The ailments, which he attributed to the worm, were much relieved for a time. They then became more severe; joints of the worm were again passed, and in January last he came for the second time to the hospital to be ridded of the worm. Turpentine and castor-oil were given him, as before; a long piece of the worm was again expelled, but the creature was not destroyed; so that here the worm had existed seven years, had kept its place during the terrible commotion and flooding of the intestines in cholera, and had escaped destruction by two doses of turpentine. P—— took the kousso on the 3d of May, and the next morning voided the worm, which was ten yards long.

In all cases in which the kousso has been given in the hospital, the head of the worm, or the taper portion near the head, has been found, so that there is reason to suppose that the creature has been entirely destroyed. The action of the medicine is very speedy. In one of the cases, in which the bowels were slow to move, the worm was expelled, in different portions, in the two days succeeding that in which the kousso was taken; in all the other cases it was expelled the same day, and in several of them after the lapse of only three or four hours.

The result of our experience, then, is, that the kousso

is a very effectual remedy for tape-worm; and that in its action it is both speedy and safe.

I have had little experience of the male fern. But the kousso is certainly much more efficacious than the pomegranate; and much more efficacious, as well as less disagreeable, and safer than turpentine. There is a considerable demand for it at the hospital, which, on account of the cost, we cannot satisfy. I trust, however, now that its efficacacy is known in this country, which has commercial relations with every part of the world, that a fresh supply will soon be brought here, and that we shall have it at a reasonable rate.

From one of our patients two worms, one very large, and the other much smaller, were expelled by the kousso. It sometimes happens that as many as three or four of these worms are found together; but such an event is very uncommon. The tape-worm requires no mate, and generally leads a solitary life; and, hence, has been called by the French, *ver solitaire*—the solitary worm.

In the cases which fell under my own care at the hospital, notes were taken of the ailments which the patients attributed to the worm. Most of these persons had some unpleasant sensations referred to the stomach and bowels, such as a feeling of sickness or nausea, especially on first getting up in the morning; pain, or a sense of sinking at the epigastrium; flatulence; a feeling at times as if a worm were moving in the bowel. It is worthy of remark, that in none of them was there diarrhœa. The appetite is very variable—in some, much impaired, in others, craving.

Two or three of the patients had a troublesome cough; and one, annoying palpitation; which were ascribed to the worm. Some of them complained, also, of unpleasant sensations in the head; giddiness or drowsiness felt during the day, and especially after meals; and almost all complained, more or less, of weakness, and lassitude, and incapacity of work.

The most constant of the symptons were a feeling of lassitude, a sense of nausea on first getting up in the morning, and drowsiness felt during the day. But symptoms such as these are of very little use in diagnosis. Persons who have tape-worm generally discover the fact by the passing of joints. The worm seems to grow rapid-

ly; and the tail-joints, as they attain their full development, drop off, and are voided with the other contents of the bowel. Probably no person suffers very long from tape-worm, without voiding some of these joints. The existence of the worm cannot be safely inferred, and the remedies for it cannot be given with a fair chance of success, unless joints have been passed. It is a common belief that while the joints are dropping, the worm is feeble, and that the medicines which kill it act more surely soon after joints have been passed.

[Numerous cases have been recorded by Mr. Armstrong, ('Lancet') and others, which fully confirm the superiority of this medicine over those usually given in tape-worm.] —*Ib.*

Savine in the Treatment of Habitual Abortion. By Dr. Metsch.—When the disposition to abortion is dependent upon a diminished vitality of the uterine system, or functional weakness of its nutritive vessels, Dr. Metsch says that medicines of a stimulant and strengthening description, acting powerfully upon the circulation of the organ, are indicated, and of all such substances *savine* is most to be relied on for this end. Of course so powerful a drug requires skilful selection of appropriate cases for its employment, or it may give rise to hyperæmia of the pelvic abdominal organs, inducing hæmorrhage, inflammation, abortion, or death itself. Local or general plethora, or serious diseases of any part, contraindicate its use. An infusion is made by adding from two to four drachms to six ounces of boiling water, a spoonful being given morning and afternoon during the intervals between the menstrual periods. On some occasions, before commencing with it, catarrhal or gastric disturbances have to be allayed, as also irritation dependent upon congestion, rheumatism, or disorder of the nervous system. Small general or local bleedings, emetics, aperients, tepid baths, or friction of the surface, are required in different cases. So, too, regulation of diet, abstinence from sexual excitement, rest in the horizontal position as long as pain is present, are then indicated.

If the disposition to abortion depends upon an augmented irritability, and contractibilty—a condition not always opposed to the first named—the savine does not alone suffice, but a medicine is required that exerts a special effect in regulating uterine irritability, the ergot of rye, which should be added to the infusion in the proportion of one to two, when former miscarriages have been induced by the primary contraction of the womb without preliminary hæmorrhage. Another modification in the prophylaxis is to be made when former abortions have been attended with great urinary irritation, in which case six drops of Tr. Lyttæ should be added to each dose. When, prior to former abortions, there has been great disturbance of the digestive organs, very small doses of ipecacuanha may be alternated with the above.

The savine is also found useful in various chronic diseases of the female genital organs, connected with vascular and secretory torpor, especially in passive hæmorrhages and leuchorrhœa. In the same way it is of good service, conjoined with mechanical means, in prolapsus uteri consequent upon frequent or difficult labors and abortions. — *Zeitochrift fúr Gerburtkunde, Band xxxvi;* and *Brit. and For. Med. Rev.*

Treatment of Puerperal Fever. By E. Murphy, M. D. —[As a general rule we avoid the republication of the routine lectures which are now so commonly committed to the pages of the weekly journals, but puerperal fever is a disease of such moment, and it is so important to the practitioner to have the most enlightened views on the subject of treatment at his "fingers' ends," as it were, that we offer no apology for departing from our usual custom. After an admirable history of the various types of childbed fever, their symptoms and pathology, Dr. Murphy thus proceeds:]

The treatment of puerperal fever must be considered in reference to the views of the malady above stated. It divides itself into two questions: First, the prophylactic treatment. In discussing this question, I must ask the reader to assume with me that it is contagious. If it be

not, precaution taken can do no harm. On the other hand, if contagious, the neglect of such means of prevention would do infinite mischief. We have already alluded to the rapid diminution and ultimate disappearance of puerperal fever in the Dublin Lying-in Hospital, when Dr. Collins put into force active sanatory measures. The chief agent employed by him was chlorine. Dr. Routh gives an interesting account of the means adopted by Dr. Semelweiss, for preventing the spread of the disease. "He recommended all students frequenting the division (the labor-wards) not to handle dead matter, or if they did, he forbade them to make any examination till the following day. In the second place, he directed all the students who attended the practice of the division *to wash their hands in a solution of chlorine prior to and after every (vaginal) examination made on the living subject.* The result of these precautionary measures was that the number of deaths at once fell to seven per month." They had been from 30 to 40 per month, and we can assign no other cause for this great difference of mortality than the means used by Dr. Semelweiss for preventing the communication of the disease. The prophylactic was chlorine, and hence, comparing the facts stated by Dr. Collins with those of Dr. Semelweiss, this gas seems to have the power of destroying the poison. In order, therefore, to prevent the diffusion of puerperal fever, chlorine is essential. Solutions of it should be freely used, the hands washed, and the sheets of the bed sprinkled with it, even at the risk of damaging the texture. The vapor of chlorine should also be diffused through the apartment. I am inclined to think that the chlorates of soda or potass taken internally would be useful on the same principle. Besides these means the practitioner should also be careful, if in the attendance of a case of puerperal fever, to change his dress before he visits another patient in labor. The fomites of the fever have been known to lurk about the dress of the attendant, and produce it after a period much later than might be imagined. In one ward of the Dublin Lying-in Hospital the fomites remained for months, and renewed the disorder. If proper precautions are used, I am satisfied that there is no danger of communicating puerperal fever; but I fear in some instances a want of caution has had this effect. The practitioner may have been led astray by the

theorist, who tells him that puerperal fever is nothing but a local inflammation, which we know is not contagious; or he may imagine there is no risk because some of his patients may have escaped contamination. Errors of this kind, we have reason to think, have led to the dissemination of poison, and should be carefully guarded against.

The remedial treatment has been a warm subject of controversy, chiefly arising from the different views of the disease that have been advocated. Those who hold the doctrine of local phlegmasia defend an active antiphlogistic treatment; while the advocates of the epizootic character of puerperal fever maintain the importance of supporting the constitution against the attack. It appears to us that the treatment of both, to a certain extent, is correct, although the principle on which the antiphlogistic plan is founded we believe to be erroneous. Depletion, purgatives, emetics, certainly reduce inflammation, because they diminish the quantity of the blood and the velocity with which it is impelled by the heart; but the very same means, by lessening the quantity of poisoned blood, and by acting as evacuants to discharge a poison from the circulation only, renders the blood more pure and less dangerous than it was before. These remedies are beneficial, therefore, not as antiphlogistics, but as antiseptics. If we act on such a principle the only question we have to decide is—can the patient bear the treatment? Has the constitution sufficient power to recover itself from the loss occasioned by the treatment when it is already prostrated by the influence of a poison? We believe that this question will admit of no general answer; we can only speak with a special reference to the constitution and the conditions in which it is placed. If the dose of poison be excessive, evacuants are inadmissable, because the constition has no power, no action. On this principle we object to depletion in Armstrong's "congestive disease," and consider Mackintosh's doctrine of "latent peritonitis" altogether fallacious when applied to puerperal fever. If but little be absorbed, and the prominent symptoms are of a sthenic character, evacuants are the most efficient, because the poison is rapidly removed, any local inflammation is promptly subdued, and the constitution soon recovers itself. Between these extremes there is every shade of intensity in the disease, which almost renders each

case a separate subject of consideration. In some the evacuant treatment, in others the stimulant, is successful. In those situations where the poison is concentrated, as in hospitals, or in places where it suddenly appears and commits great devastation, we think that the stimulant practice is most advisable. The remarkable success of Dr. Copland's practice in the Queen Charlotte's Hospital is a sufficient illustration of this truth, and may be contrasted with the failure of Armstrong's treatment in the Dublin Lying-in Hospital, about the same period. On the other hand, when the poison is diffused, as in private practice, evacuants may be employed with advantage; at the same time, it is right to observe that the natural strength of the patient's constitution forms an important element in determining this question. It is very well known that the strength of constitution varies with the locality. The inhabitants of London, for instance, do not bear the same activity of antiphlogistic treatment as those of Dublin or Edinburgh. The residents of a country district, breathing a purer air, and enjoying active exercise, or occupied in rustic duties, have stronger constitutions than citizens; and thus, when we would wish to form a fair estimate of any proposed treatment by the evidence of its success which is adduced, it is very important to inquire where the cases treated have lived. Dr. Gordon's and Mr. Hey's were chiefly rural practices. Dr. Armstrong's and Dr. Mackintosh's were scattered over a town; and although each met with cases of intense puerperal fever, they were exceptions, not the rule; we have every reason to think that their "clientelle" consisted of patients with naturally strong constitutions that would admit of free evacuation. You may meet, however, and in cities often will meet, with patients whom you cannot bleed, and who require stimulants; we cannot, therefore, lay down a general rule, unless it be that of Sydenham—"to study the constitution of the year," and we would add, "of the place." Having premised these general observations, we shall proceed to consider separately the remedies usually employed; and first, with regard to the evacuants.

Depletion is more generally employed than any other mode of treament. Dr. Ferguson, after a most careful and cautious inquiry, gives the following as the sum of his experience of bleeding as a remedy in puerperal fever:

"Of all the means we possess of arresting this malady, I believe bleeding, general or local, to be far the most extensively applicable. The cases in which it is not so are exceptions to the rule." We fully agree in this opinion, but we do not consider depletion efficacious because it is antiphlogistic, but because it is a most rapid evacuant. On this principle alone can we explain the efficacy of the very bold depletion sometimes employed. We do not treat peritonitis by taking away large quantities of blood; and there are some forms of it in which we cannot bleed at all. Yet in puerperal fever Hey took twenty, thirty, even fifty ounces of blood from the arm. Mackintosh says—"In some fortunate cases, the histories of which were lost in my travels, I can well remember abstracting forty and fifty ounces at one bleeding." In order that depletion be efficient it should be promptly undertaken the the moment that a rigor gives evidence that the poison is absorbed; the removal of blood then is attended with the best effects; but at a later period, when time is given to alter its properties, and to soften the tissues, when effusions take place, depletion has a contrary effect; the strength of the patient at once gives way, and death rapidly follows. Such we believe to be the principle on which depletion, when it may be adopted, is useful; but you must always bear in mind that it may be quite inadmissible; you must carefully inquire into the character of the epidemic, the constitution of your patient, and, as I have said, the constitution of the place. If you seek among the symptoms for a guide to determine your practice, I know of none we can depend on but the pulse, and even that is uncertain. If the pulse be firm and wiry you may bleed, but if it be compressible and unsteady you cannot do so. In the former case the constitution is struggling against the disease, and manifests a degree of vigor that will admit of depletion. In the latter, it is rapidly giving way under the attack, and depletion only hastens debility and its consequence, death; but although this is generally true there often exceptions in both cases which may deceive you. Depletion, therefore, sometimes must be tried as an experiment, and, if so, should be had recourse to as soon after the rigor as possible; at a later period it should never be employed. In hospital practice, and with women in the lower walks of

life, who have been subjected to privations or causes of mental depression, we would not think depletion advisable.

Purgatives, also, act as evacuants, and those that have had the most power in this respect have always been the most efficient. The hydragogue catharics, which produce the most rapid and abundant discharges from the intestins, are preferred. The object is not merely to unload the intestines, but to produce catharsis. In one case, Dr. Armstrong having taken twenty-four ounces of blood from the arm, so as to induce fainting, gave a scruple of calomel and two ounces of strong infusion of senna, containing two drachms of sulphate of magnesia, every hour till copious evacuations should be produced. "In about four hours the medicines began to operate, and several copious, dark fetid stools were discharged; from that time considerable relief was obtained, and a regular perseverance in purgatives, with mucilaginous drinks, and a small quantity of exceeding weak chicken broth, completed the cure in five days." This, certainly, is not the treatment of peritonitis. If this active practice overcame the constipation that attends this inflammation, it would have the effect, not of reducing, but of greatly increasing it; but as a means of purifying the blood, by exciting an active secretion from the intestines, the practice is intelligible.

Emetics were among the first remedies discovered for the treatment of this disease. In 1782, Doulcet at once checked the progress of this distemper by the free use of emetics; the hint was given him by nature herself; one of his patients, who had been just attacked, made several efforts to vomit; he gave her a large emetic, which proved salutary. He continued them, and she recovered. This practice was repeated in every case, and with such remarkable success that it was supposed Doulcet had found a specific; a second visitation, however, afterwards presented itself, and Doulcet's specific was found to be of no use. Richter, Tonnellé, and Cruveilhier, also found emetics, in some cases, very useful. This practice, then, fails in some instances and succeeds in others. Can any reason be assigned for this difference of success? Dr. Ferguson, we think, has given the true explanation. Emetics are efficient "when the violence of the malady has fallen on the liver especially, and when there is early nausea

and spontaneous vomiting." "In puerperal fever I have already noticed the frequency of nausea, biliary derangement, dusky staining of the skin, and jaundice; and it must not be forgotten that Gaspard and Cruveilhier have proved that one of the modes by which infection of the blood is relieved is through the liver. On these grounds, and within these limits, the use of emetics will be found rational and beneficial."

Diuretics have received very little attention in the treatment of puerperal fever; yet, as evacuants, I believe them to be very efficient. In some cases I have found the free use of nitrate of potass of great value; and although as yet my experience of it as an evacuant in puerperal fever is too limited to speak with sufficient confidence, I am inclined to think that it is well worthy of a more decided notice from the profession. Its action may be explained on the same principle as emetics—the infection of the blood being relieved through the kidney in place of the liver.

Mercury is the only medicine that may be considered strictly as an antiphlogistic, and it is the only remedy of doubtful efficacy. Patients have been salivated with mercury, and no remission of the symptoms followed. Dr. Ferguson says—"With regard to the use of mercury in puerperal fever, I think that as a purge it may be used in all the forms with advantage, but not as a means of affecting the constitution." Dr. Collins used mercury in combination with ipecacuan in large doses, four grains of each, every second, third, or fourth hour. In other instances, he gave a scruple of calomel every second or third hour. "One patient took more than an ounce." Dr. Collins further remarks—"I could not observe any better effect from the large doses than the small; the system was not more speedily influenced; and when they did so act, it was often with violence, so as to endanger the destruction of the soft parts about the palate." In a note he observes—"It is supposed by some practitioners that when we can get the system under the influence of mercury recovery is certain. This is not the fact, as I have seen several cases, where death took place under these circumstances. It is, notwithstanding, a very favorable occurrence." Mercury, therefore, seems to be the least efficient of the remedies employed.

Antimonials have been also employed. Boer used an unknown preparation extensively in the Vieuna Hospital. Dr. Gooch supposed it to be "Kermes mineral;" Dr. Ferguson, "James's powder." Its action was chiefly on the skin, and was found to have a most beneficial effect. Dr. Denman derived considerable advantage from tartar emetic in the treatment of puerperal fever, acting both as an emetic and in increasing the action of the exhalants.

In the treatment, then, of puerperal fever by evacuants, the first question to decide is—Can the patient bear any evacuation? The extreme degree, the ataxic form of the fever, admits of none. In the less severe varieties we may use some one or other of them, and it only remains to determine which we shall select. If the pulse justify depletion, it is the most efficient when promptly adopted. Active saline purgatives may also be used in such cases with advantage. In more severe cases the lancet may not be employed, and yet other evacuants may be useful, which Nature herself will sometimes indicate. The fever may commence with an attack of diarrhœa, and if, in place of checking it, we rather maintain the evacuation, the patient will recover. Bilious vomiting taught Doulcet the value of emetics, and so, with regard to the efforts to throw off the disease by other channels, the symptoms will point out the treatment. There are cases, however, in which no evacuation dare be attempted,—in which stimulants alone will save the patient; and when this course is pursued it must be a bold one—a hesitating practice is perfectly useless. Dr. Copland gave from eight to sixteen grains of camphor every four or five hours. On the same principle opium may be given to any extent short of narcotism; but by far the most efficient stimulant is turpentine, because it combines in itself a double power. It supports the constitution, or rather rouses its energies against the poison, while it acts as an evacuant in removing it. Turpentine may be combined with castor-oil, in half ounce doses, and given every three or four hours with great advantage. As a local application, also, it contributes greatly to relieve the abdominal pain which the patient experiences. With regard to this medicine, I have no hesitation in stating, with Dr. Copland, that "*there is certainly no remedy so efficacious as a decided and judicious use of spirit of turpentine.*" With

these observations we shall conclude the discussion of this perplexed subject, fully aware that in our attempts to unravel some of its difficulties we originate new questions for discussion and controversy. If, however, we have succeeded in rendering intelligible the principles upon which it appears to us the the most efficient plans of treatment have been successful, our object has been fully accomplished.—*Medical Gazette.*

A Japanese Remedy for Sterility. By Dr. E. Williams. —[Dr. Williams believes there is a botanical remedy in Japan and China which exerts a specific influence upon the uterus, more particularly in cases of sterility and checked menstruation. The tree is one of the order Ternstromaceæ of Jussieu, growing to the size of the English laurel, with leaves somewhat larger than the congou tea, and the odor resembling pulegium and sabina.]

The mode of preparation is to take a quantity of the leaves, macerate them in as much rice-spirit (samshu) as will just moisten them for six hours; then express and give about a teaspoonful every hour, and two or three doses will invariably bring on the menstrual secretion, which can be maintained by a dose or two daily for any length of time.

Females in the healthy state are expected to menstruate in their eighth year in Japan and China, and should they not do so they are inelligible for betrothal; therefore recourse is had to the *key tu sing* with certain results.

To ensure its success, according to popular belief, the leaves must be gathered by a virgin, the while using certain cabalistic formulæ, at the full of the moon, and during the burning of a certain number of highly perfumed jop-sticks.

When required for the purpose of obviating sterility, the tree must be in its second year, and also be gathered with certain prescribed formulæ at the wane of the moon, and equal parts of the root must be added to the preparation, which is made in the same manner as the preceding receipt.

That the root is aphrodisiac in its effects I have not the slightest doubt, as I have administered it to animals with obvious results, and without any ill effects even to mules and castrati.—*Lancet.*

Indian Hemp as an Oxytoxic. By Dr. Simpson, Edinburgh.—Dr. Simpson stated, that, in the early part of the winter session, he had given Indian hemp (Cannabis Indica) in several cases of tedious labor, with the view of ascertaining if it possessed any oxytoxic effect (like ergot of rye) in increasing and exciting the parturient action of the uterus. He had been induced to try the effects, if any, of Indian hemp during labor, in consequence of Dr. Churchill stating, that it possessed powers similar to those of ergot of rye in arresting hemorrhage, when dependent upon congested states of the *unimpregnated* uterus. In the few cases of labor in which it was tried, parturient action seemed to be very remarkably and distinctly increased after the exhibition of the hemp; but far more extensive and careful experiments would be required, before a definite opinion could be arrived at relative to its possession of oxytoxic powers, and their amount.—*Monthly Journal.*

REVIEWS.

ART. I.—*History of the Strange Sounds or Rappings, heard in Rochester and Western New York, and usually called the Mysterious Noises, &c.* By D. M. DEWEY, Rochester, 1850.

Exposition of the Rochester Knockings. By AUSTIN FLINT, M. D., CHARLES A. LEE, M. D., and C. B. COVENTRY, M. D. Buffalo Commercial Advertiser, Feb. 17th, 1851.

The newspaper press has teemed for many months past with marvelous accounts of strange noises, heard in various towns of western New York and held by the superstitious to be connected with the spiritual world. These narrations have excited the most intense interest in the popular mind. Persons from all parts of the country have visited Rochester to listen to the mysterious rappings, and have given to the public the most wonderful descriptions of what they saw and heard. Mesmerism has been thrown into the shade; the feats of the "Phreno-Magnetisers" have been beggared by the exploits of the Rochester "witches." Hitherto we have refrained from all notice of this affair, because we felt satisfied that it was a delusion, and that in time it would meet with a just exposure. An exposition of the mystery has been made, and we purpose now, with the explanation, to give a brief history of the imposture. In doing so, let us not be accused of traveling beyond the bounds of our profession—our readers will see, before we are done, that the subject

is one which comes legitimately within the province of physiology.

The females who have attracted so much attention are Mrs. Fish, a widow, and Miss Margaretta Fox, and Miss Catherine Fox, her sisters, young girls, aged, one fourteen and the other sixteen years. They have been considered respectable people. At first, their exhibitions were free to all the curious, but for some time past they have been perambulating the country fleecing the gullible of their dollars. In the house of their father, Mr. John D. Fox, the noises were first heard about the latter end of March, 1848, one evening after the family had retired for the night. They seemed to be in one of the bedrooms, and sounded as though some one was knocking on the floors, moving chairs, etc. A perceptible jar was felt by the persons present when their hands were placed on the furniture in the room, and was also experienced by them as they stood on the floor. This has been constantly observed ever since in all the exhibitions of these wonder-mongers. The Rev. C. Hammond, of Rochester, undertook to investigate the strange phenomena, and the following is an extract from his letter describing the manifestations of one evening:—

"On taking our positions the sounds were heard, and continued to multiply and become more violent, until every part of the room trembled with their demonstrations. They were unlike any I had heard before. Suddenly, as we were all resting on the table, I felt the side next to me move upward—I pressed upon it heavily, but soon it passed out of the reach of us all—full six feet from me, and at least four from the nearest person to it. I saw distinctly its position—not a thread could have connected it with any of the company without my notice, for I had come to detect imposition, if it could be found. In this position we were situated, when the question was asked, "Will the spirit move the table back where it stood before?"—And back it came, as though it were carried on the head of some one, who had not suited his position to

a perfect equipoise, the balance being sometimes in favor of one side, and then the other. But it regained its first position. In the mean time the "demonstrations" grew louder and louder. The family commenced and sung the "spirit's song," and several other pieces of sacred music, during which accurate time was marked on the table, causing it to vibrate—a transparent hand, resembling a shadow, presented itself before my face—I felt fingers taking hold of a lock of hair on the left side of my head, causing an inclination of several inches—then a cold, death-like hand was drawn designedly over my face—three gentle raps on my left knee—my right limb forcibly pulled, against strong resistance, under the table—a violent shaking, as though two hands were applied to my shoulders—myself and chair uplifted and moved back a few inches, and several slaps, as with a hand, on the side of my head, which were repeated on each one of the company, more rapid than I could count. During these manifestations, a piece of pasteboard, nearly a foot square, was swung with such velocity before us as to throw a strong current of air in our faces—a paper curtain attached to one of the windows was rolled up and unrolled twice—a lounge immediately behind me was shaken violently—two small drawers in a bureau, played back and forth with inconceivable rapidity—a sound resembling a man sawing boards, and planing them, was heard under the table—a common spinning-wheel seemed to be in motion, making a very natural buzz of the spindle—a reel articulated each knot wound upon it, while the sound of a rocking cradle indicated maternal care for the infant's slumbers. These were among many other demonstrations which I witnessed that evening, amid which I felt a perfect self-possession, and in no instance the slightest embarrassment, except a momentary chill when the cold hand was applied to my face, similar to a sensation I have realized when touching a dead body. That any of the company could have performed these things, under the circumstances in which we were situated, would require a greater stretch of credulity on my part, than it would to believe that it was the work of spirits. It could not, by any possibility, have been done by them, nor even attempted, without detection. And I may add, that near the close of the demonstrations at this visit, there was a

vibration of the floor, as though several tons in weight had been uplifted and suddenly fallen again upon it. This caused everything in the room to shake most violently for several minutes, when the force was withdrawn."

The reader will bear in mind that this is the grave statement of a serious man who writes like a scholar. He is accredited a man of veracity or his letter would not have been published, and it is manifest that he is fully persuaded of the reality of what he saw, as well as that all the commotion in the room was the work of "spirits."

The following colloquy is reported as having taken place between the "spirits" and a Mr. "P.," who had frequently been present at the performances of the witches:

"At one time, when some of these sounds had been unusually loud, I inquired the object of them. The answer was, "To convince you." I said, "You cannot be spirits, for according to my theory, spirits can pervade matter, and pass through it, but cannot move it, and handle it, as this table has been moved." Reply. "You are mistaken: we can and do affect matter at our will." "I have heard it said that you sometimes manifest yourselves to persons as by the touch of the hand, etc. Is it so?" "It is." "But it is said that you make such manifestations in the dark only; this leads to suspicions, with all the precaution that can be taken. Why not do this in the light?" "Because, that in such manifestations we assume a material form, and it would frighten. We do not wish to alarm, but to convince."

By the agency of these "spirits," a father and mother were permitted to converse with a departed child; a brother talked with his sister about the disease of which "her body died;" a man was told his age, his wife's age, "and that of every child in his family correct to a day, a thing he could not do himself," etc. On one occasion a gentleman fancied that he might catch Miss Fox by a trick. "So he thought of the name of a young lady who had been dead for several years. He asked if the "spirit" would rap on his touching the point of his pencil upon

the name he was thinking of, provided he would write down ten names, and that among the ten." There was an affirmative reply. Ten names were written, but the name of the young lady was not among them. He went through the list, pointing at them successively; but there was no rap. The company seemed much astonished. He then added two more names, one being that of the young lady, "and as quick as he touched it, there came a rap." He then asked it (*mentally*, it is reported) "to spell out the name he thought of, and it spelled out the name of the young lady."

But enough. We must not trespass too far upon the patience and good nature of our readers, but we beg leave respectfully to submit to them, whether *clairvoyance* or *prevoyance* furnishes among their marvels anything more wonderful than this? And now let us see what becomes of it all.

The Rochester sorceresses had begun to turn their art to a good account. They had just concluded a profitable exhibition in the city of N. York, and had gone to Buffalo to turn the city upside down. Our friends, Professors Flint, Lee, and Coventry, of the University of Buffalo, were led by curiosity to visit their room, and while watching their movements discovered a clue to the mystery. They saw from the countenance of Miss Fox that the sounds were due to her agency, and that they involved an effort of the will. In fine, they became satisfied that they were produced *by a partial dislocation of the knee joint*, which the young woman was able to effect at pleasure. Resting her foot upon a solid support, she was able to displace the tibia, which was attended by a loud noise, and the return of the bone to its natural position gave rise to a second sound. It was a singular coincidence that furnished the gentlemen with the means of demonstrating the correctness of their explanation. After they had arrived at their conclusion, they met with a highly respect-

able lady in Buffalo, who, by this motion of the tibia upon the femur, can "develop sounds similar both in character and degree to those professedly elicited by the Rochester impostors from the spiritual world."

One would suppose that this would have put an end to the imposture, but the spirits were not to be laid so easily. Mrs. Fish and Miss Fox appeared next day in a "card," denying that they were impostors, and bantering their accusers to make trial of the truth of their theory. Accordingly an investigation was undertaken, the result of which is given in a letter from Dr. Lee to the editor of the New York *Tribune,* which was published on the 25th of February. Dr. Lee, in company with his colleagues, Dr. Flint, and Dr. Coventry, attended at the rooms of the ladies on the evening of the 18th of that month. Besides these gentlemen, some eight or ten individuals, including three ladies, friends of the "witches," were present by invitation. The preliminaries being arranged, it was asked whether the "spirits" would be present and communicate with the committee through the evening. After an interval of a minute or so, says Dr. Lee, raps were heard and continued in quick succession for some time, which Mrs. Fish declared to be an affirmative answer. This was repeated, so that there would be no mistake as to the willingness on the part of the "spirits" to accommodate the gentlemen.

This being fully understood, the ladies were requested to be seated on chairs, their limbs extended, and their heels resting on cushions, in which position, without a solid support to serve at once as a *fulcrum* and a medium for conveying the vibrations, it was evident, if the theory proposed was sound, there could be no noises produced. The witches remained fifty minutes in this position, during which time *no raps were heard,* though the "spirits" were urged to manifest themselves; but the moment the ladies

placed their feet on the floor the knockings commenced and continued for several minutes.

But there was still another test to which the necromancers were doomed to be subjected, and this we give in Dr. Lee's own words:

Seating ourselves before the ladies, we grasped each of their knees firmly, so as to prevent any lateral movement of the bones; the "raps" immediately ceased, and were not heard while the knees were thus held, except near the close of the experiment, which continued once forty minutes, when two slight sounds were heard, on slightly relaxing my grasp, while at the same time I distinctly felt the heads of the bones grating on each other, and the muscles contracting, which, though a very positive kind of evidence to me, I am aware is not so satisfactory to bystanders.

Some times, in the course of the trial, the hands of the operators were released, and raps "were always heard during the interval of removal." At the close of the sittings, we are told by Dr. Lee, Miss Fox was much affected, and shed many tears, which excited much sympathy on the part of some of the gentlemen present.

What plea will the "witches" and their allies, the *clairvoyants*, set up? How will they account for their failure to evoke the "spirits" when their knees were held? Will they allege, as we have heard mesmerisers do, when the bandage was drawn a little too securely over the eyes of their subjects, "that the pressure disturbed the magnetic influence?" Or will they say, as a witty friend of ours suggests, "that the modest 'spirits' were frightened away at seeing the hands of the doctors on the ladies' knees?"

If we are not mistaken, there is a lesson taught by this imposture, which will not be without its effect. Here we have seen done by alleged "spiritual agency," all that is professed to be done by the subjects of clairvoyance, and after all it turns out that the revelations which have so astonished preachers and editors, and made multitudes

stare wherever they have been reported, come from a clever girl's knee joint. If clairvoyance is able to hold up its head for a good while after such an exposure, we confess it will surprise us.

This Rochester imposture has been productive of much mischief; more than one individual has been driven by it to madness. A murder and a suicide have been traced to its baleful influence. The editor of the *New York Medical Gazette* mentions a case of insanity which had just occurred in that city, "by reason of the revelations made by mysterious raps, that the steamship Atlantic had been wrecked, with the loss of all on board." Among the passengers whose "spirits" were declared to have made the rapping, one has arrived at home "to find his wife a maniac, from a belief in these ghostly knockings." Mesmerism is not less pernicious. The editor mentions the case of another female who "has just been sent to the asylum, by reason of mesmeric operations upon her nervous system, avowedly for the purpose of rendering her clairvoyant, but with the effect of dooming her to lunacy. "And," he adds, "these recent instances are not mere isolated cases, for in several of the asylums the victims of these kindred impostures are hopelessly insane."

We have adverted to this subject in the hope of exciting the profession to a more united opposition to the host of impostures with which our land is infested. Physicians are the constituted guardians of the public health. They are expected to give direction to popular opinion on all matters relating to the human economy. Few of them, it is pleasant to know, were made dupes to the Rochester imposition, as few, compartively, have embraced the absurdities of mesmerism. While one, here and there, has been found with credulity sufficient to swallow all the monstrosities of clairvoyance, the great body of the profession has listened to its reputed miracles with becoming indifference. Medical men, accustomed as they are to the in-

vestigation of physical phenomena, ought to be the last, and as a general rule they have been the last, to fall into the wiles of impostors. The physiological peculiarity in the case of Miss Fox is interesting, and, from the fact that it has been found to exist in another lady in a neighboring city, is probably not so rare as might have been supposed. It is altogether probable that we shall now hear of many analogous instances.

ART. 2.—*United States Exploring Expedition, during the years* 1838, 1839, 1840, 1841, 1842, *under the command of Charles Wilkes, U. S. N.* Vol. ix.

The Races of Man, and their Geographical Distribution. *By* CHAS. PICKERING, M. D., member of the scientific corps attached to the Expedition. Boston: Charles C. Little & James Brown.

The Races of Men: A Fragment. By ROBERT KNOX, M. D., Lecturer on Anatomy, and corresponding member of the National Academy of Medicine of France. Philadelphia: Lea & Blanchard.

The New Englander—1850.

The North American Review—1850.

The Doctrine of the Unity of the Human Race examined on the principles of Science. By JOHN BACHMAN, M. D., Professor of Natural History, College of Charleston, S. C.

There are few questions presented to the investigation of the explorer of nature, of greater importance than those comprised within the science of Ethnology. The profound depths of that science contain intellectual treasures of the highest value, and the farther the subject is penetrated the more we feel its value. The origin and destiny of the human race have ever been themes of momentous importance, and will continue to be until "corruption has put on

incorruption." All philosophy, all truth, all of earthly interest, have these questions for their nucleus. The loftiest intellect known to pagan philosophy struggled first to find the KNOWN, and from that to reach after the unknown. Those who may freight their memories with Mr. Grote's full, perfect, and massive sketch of Socrates, will be at no loss to find how much of the labor of that high intelligence was devoted to the origin and destiny of the human family. And now, after two thousand years have rolled their terms since the Athenians heard philosophy from the voice of their greatest intellect, the question of the origin of man, is yet a matter of debate. Between the supposed conflicting elements of science and revelation, the subject has reached a state of entanglement that might have gratified Berkely, of Cloyne, Hobbes, or Hume. Science is widening its domains, and bringing many wholesome and vital truths home to the interests of every day life, but there are many who feel alarm at the corresponding fact, that efforts are constantly made to narrow down the possessions of Revelation, until what is left is scarcely worth retaining. Moses is a myth, his statements preposterous, and his institutions are denounced as being in the very spirit of their age, by persons who can find no antiquity equal to them. The loftiest inspirations of the Hebrew prophets are referred to as the distempered ravings of Jewish rhapsodists, and the Christian Dispensation is made to hang upon a reference to it by Josephus, by men who unhesitatingly credit Thucydides, whose history makes no mention of Socrates, who was the most notable man of the period, pourtrayed by the historian.

In the investigation of the origin of man, it is impossible to proceed without reference to the Bible. The question of the origin of the human race is indissolubly connected with its destiny, and if the origin of man is to be decided by science without the aid of revelation, what is to be the fate of the more important branch of the subject—the des-

tiny of man? What does, what can science propose to do with that?

We do not design to enter upon an elaboration of the subject of Ethnology at present, but shall be content to submit a summary of the present position of the investigation. The North American Review, for January, 1851, in a notice of "the tendency of modern science," says, rather flippantly: "last year, when Agassiz announced the discovery of his science, that the races of men could not have been derived from one earthly parentage, a feeble outcry from very feeble voices rose, or strove to rise upon the air; but there came back no echo from public opinion, and it has already died away." Can it be that the North American Review has been the victim of anæsthesia? Are the voices of Dr. Bachman, and of the Reviewer in the New Englander of Professor Agassiz' doctrine, what the North American Review ranks among the feeble things of this world? Has there indeed been no echo from public opinion? The Review says "*it* has already died away," and we are at a loss to know what he means; we know not whether he tries to say the public opinion which gave no echo has already died away, or that the echo which never had an existence, has died.

No one can hold the merits, the high and ennobling qualities of Professor Agassiz in higher estimation than we do. In his departments of natural science, he has, perhaps, no equal, certainly no superior. We have given his prelections on the origin of man, all the careful, unbiassed study we were able to command, and without any response from his opponents we felt the conviction that he had failed to establish his doctrine. The necessity he feels for a separation of the questions, the unity and the origin of the race, shows the constraint that bound his intellect. The plurality of origins was not, as the N. A. Review says it was, a discovery of Agassiz' science, for it had been promulged long before geology came to light,

and long before the discovery of specific fauna and flora, the basis on which Professor Agassiz builds his superstructure. The representative species of particuliar localities is insisted upon by Professor Agassiz, and he handles the argument with boldness and power. But as a man is a cosmopolite, in the largest sense in which that term can be applied to a living being, the analogical bearings derived from representative species of fauna and flora are not very perceptible.

The errors of chronologers have done much towards the creation of false issues on geological and ethnological subjects. A great deal is assumed, we think, when an attempt is made to establish any certain and indubitable basis for the age of the world upon the Mosaic records. The origin of man is developed, without any attempt to fix the time of that origin. That the human race has been on the globe a much longer time than chronologers assume in their calculations, we think susceptible of a great deal of proof. That there is an inconsistency in the progress of civilization which all human records and all human experience show to be very slow; that stage of civilization clearly and abundantly proved to be in existence, according to the earliest human records; and the age of humanity, assumed by chronologers, must strike the attention of all who investigate the subject. For instance, how can we account for the culmination of Assyrian civilization, if chronology be infallible, by any thing we know of the progress of any nation since Christianity dawned upon the world? The conceptions formed by readers of history, of the height reached by the Assyrian empire, were of a lofty character, but their loftiest reaches did not approach the developments that have been established by the researches of Dr. Layard. He has shown that the farther he goes back among Assyrian monuments, the more proofs accumulate of a height of civilization beyond any conceptions that had been formed from written testimony.

This much we owe to natural research, but we feel that these facts have nothing to do with any standard by which Moses is to be tried. Moses is one person, Archbishop Usher, Sir Isaac Newton and all other chronologers are different characters. That the Mosaic account of the origin of the human race is true we are well convinced. No matter how many mysterious, inexplicable facts may exist around us, which no human science can explain or penetrate, we hold that man originated just as Moses has revealed that origin. Through all the haze that surrounds every department of ethnology, through all the clouds that lour over every point, there is one bold, certain and steady light that cannot be veiled, by any art, any science nor any philosophy. No age of civilization anterior to, or coeval with Moses, no one of the intellectual powers of Assyria, Egypt, Greece or Rome ever attempted to give a solution of what, except for Moses, would have been the most inexplicable problem on earth—we mean the gift of speech. If we lay aside the Mosaic revelation on the subject, and attempt to account for this possession, we have an enigma on our hands, of more difficult solution than any known to ethnology. In all others we may grope our way, this one completely stultifies the mind. Those who have never thought upon the subject have no idea of the difficulties that present themselves in an attempt to account for the possession of the power of clothing thought with language. This point, however, is clear and unquestionable—no human being ever spake, or uttered a thought in words except by imitation. There is not an instance on record that militates against this truth. All human experience, indeed, confirms it. No one ever talked, nor will any one ever talk except from being taught language by others. No one would be dumb but for deafness, and he that never heard others speak, cannot himself speak. We have three notable instances which speak intelligibly as to what would have been the condi-

tion of the first of the human race and of all their posterity if the first pair had not been taught speech in the only way in which it can be acquired—by hearing it. There is a young lady in this city who was able to talk up to between her third and fourth year. About that time she began to lose her hearing, and the progress of speech was checked. The defective hearing advanced until it terminated in total deafness, and in a short time she ceased to speak, because she forgot all words. Here is an instance then in which the faculty of speech existed once, while its possessor could hear, and which was completely obliterated by the loss of hearing. Some years ago, a young man, aged twenty-four, was examined by a commission of the French Academy. He had been deaf and dumb up to within four months of the time he appeared before the Academy. About four months prior to that time, he thought he felt something trickling from his ear, and upon applying his finger to it, discovered a few drops of a warm fluid. Coincident with this he heard a strange sound in his head, which he afterwards likened to the ringing of bells. The young man was overwhelmed with his sensations, but kept his newly acquired power a profound secret. He observed persons talking, and was amazed. He never had an idea on the subject until he was able to hear. During four months he kept his secret, but watched the use of speech by others in order to acquire the gift himself, and after a vigilance of four months he acquired confidence enough in his new power, to address his parents. There was certainly nothing to prevent this case from speaking, except the inability of the young man to imitate what he could not hear. The facts of this case are recorded by the French Academy after a rigid investigation of the subject.

Another remarkable case is one that occurred within the remembrances of many now living. We allude to Casper Hauser. He was born with full power of hear-

ing, but, for reasons that have never been revealed, he was confined for nearly seventeen years to a dark hole, and his keeper never uttered a word in the boy's presence. From this imprisonment, Hauser was conveyed in a wagon, by his keeper, to Nuremberg, and turned loose in the streets, the keeper making good his retreat. A merchant of Nuremberg took charge of the boy, for the purpose of educating him, and he rapidly acquired the power of speech after he was placed where he could hear it. He lived between sixteen and seventeen years without hearing a word, and he never attempted to utter one, but as soon as he was placed where he could hear speech he acquired the gift.

These are expressive facts—they speak no dubious language. If one man cannot originate language, it is plain that one hundred could not. Men may increase the powers of a language, but this is widely different from creating one. We know what wonderful powers the imagination has and its offices, but according to John Locke and David Hume, and all other reputable metaphysicians, the imagination has not a particle of creative power. Give it an idea, or a form to work upon, and it may weave it into ten thousand forms, but it can create nothing. Thus it is with the gift of speech—man has no creative power over it—after the elements are given to him, he can extend their boundaries to a wonderful extent, but at the start, he is dependent.

These truths, which cannot be controverted, indubitably show that Moses is the only historian of the human race who ever attempted to show where and how man obtained his power of speech. If the Creator of man had not conversed with him, and thus enabled him to use his powers of imitation, the human race would have been dumb to the present hour. And the revelation of this important event shows how infinitely much more Moses knew of what he speaks in the book of Genesis, than is

known among those who think themselves superior to him in more than "the learning of Egypt." In the midst of a cloud of tobacco-smoke, German philosophy teaches that Moses is a myth, but we have, in these remarks, shown that he revealed a truth, against which angry surges may beat in vain.

We yield to no one in our devotion to Ethnology in all its departments. We have cultivated it with all the power that we have been able to devote to it, and we feel the most fervent love for the whole science. But with all our love for it, we unhesitatingly declare that we would not exchange the satisfactory solution that Moses gives to the mystery of human speech for all that is known or imagined in Ethnology.

Having shown that Moses is far beyond all others in his account of the gift of speech, and that no one but the historian of the first pair on the earth ever pretended to account for the existence of that great element of human power, happiness, and progress, we think he may be trusted in other important elements of that early history. As he is rational and reliable in that important particular, and is the only one who claims any regard for the statement, he may be judged rational and reliable in those other statements where he stands alone, especially as there is nothing in the statements that are repugnant to reason.

It is of course impossible to elaborate the points we have introduced in these remarks, and our desire is rather to call the attention of medical readers to the subject of Ethnology, and to the best sources of information on that science, than to enter into a minute investigation of the various questions connected with it. The subject of Ethnology is of the profoundest importance to medical philosophers, and its elucidation must be, in a great measure, confided to them. We shall, on some future occasion, enter more fully into the merits of the questions of eth-

nology than we have been able to do in this number, and we shall be pleased if some of the correspondents of this Journal will give its readers an essay on the science.

Among the works named at the head of this article is Pickering's "On the Races of Man and their geographical distribution." The author, who is a physician, was a member of the scientific corps attached to the exploring expedition sent out by the Government of the United States. Dr. Pickering has made a work of great value, and deserves the thanks of all scholars for the important contributions he has made to progressive knowledge. The work is a worthy companion of Dana's Geology of the Pacific, and of Hales' Ethnography.

Dr Pickering says that he has seen eleven races of men, and is at loss, after having visited many dfferent parts of the globe, to know where to look for other races, if the eleven he has seen are not the limit. Dr. Pickering thus distributes the characteristics of the eleven races: WHITE —Arabian and Abyssinian. BROWN—Mongolian, Hottentot, and Malay. BLACKISH-BROWN—Papuan, Negrillo, Indian or Telingan, Ethiopian. BLACK—Australian, Negro.

The geographical distribution of these eleven races of men is represented on a map which accompanies the work of Dr. Pickering. It is of great value to the inquirer after ethnological science, and we commend the work as one that is indispensable in the investigation of the important subject of which it treats. The following branches of ethnological science seem to us to be handled very satisfactorily in Dr. Pickering's work: 'Associations of the races. Their numerical proportions. Relations between the races. The geographical progress of knowledge. Migrations by sea. Migrations by land. The origin of Agriculture. Zoological deductions. The introduced animals and plants of America. The introduced animals and plants of the islands of the Pacific. The introduced animals and plants of Equatorial Africa. The introduced animals and plants of Southern Arabia. The

antiquities, and the introduced animals and plants of Hindostan. The Budhist caves. The Braminical caves. Domestic animals and plants of Ancient India. Introduced plants of Modern India. The introduced animals and plants of Egypt, enumerated in chronological order."

A careful study of the chapters of the work, we have thus indicated, will enable the student to place a proper value upon the claims of specific fauna and flora. Those claims have had a more conspicuous value placed upon them than they deserve, and the information imparted by Dr. Pickering forms an admirable sliding scale by which to measure the power of a number of points, that are pressed with ardor by the advocates of a diversity of origins for the races of man.

Upon the scientific department of the questions at issue, we commend Dr. Bachman's investigations. We have not had an opportunity of reading his book, but we have read the essays he has published in the Charleston Medical Journal, and those essays contain the facts, logic and principles set forth in the book itself. We have read Dr. Bachman's essays with more than ordinary satisfaction, and freely confess that they have considerably enlarged the boundaries of our knowledge.

We hope no one will so far misunderstand us as to suppose that we design in any of our remarks to use language in any degree derogatory to Professor Agassiz. We should do great injustice to our real feelings, if we were in any way to undertake to detract from his high merits. The views he has given of the races of man are those of an honest and unususally intelligent gentleman. They are supported with zeal, earnestness and power, but we have not been convinced of their correctness. There are few men, however, who may not afford to pause and reflect well before disagreeing with Professor Agassiz on any scientific subject, and we regret that we have not been able to reach the same conclusions that that eminent teacher has reached by his inquiries.

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DEMONSTRATIVE MIDWIFERY.

The readers of Medical Journals are familiar with the clamor raised about twelve months since, by a band of medical men, in Buffalo, New York, on the subject of Demonstrative Midwifery. After the trial of Dr. Loomis, for libel, a report of the trial was published and distributed among the medical profession, and a copy of the pamphlet fell into the hands of a captious correspondent of the American Journal of the Medical Sciences. This snarling critic holds that he has reached the ultimathule of obstetrical science, and that he is, not only consequentially, but consequently infallible. He gravely assumes that those who differ from him are necessarily in the wrong, and he boldly denounces Professor White for managing an obstetrical case in accordance with his own good judgment, and with many eminent authorities. We cannot understand how the captious gentleman to whom we refer, can reconcile his treatment of Professor White with the principles of any sound code of medical ethics known to medical men.

The able and worthy editor of the American Journal of the Medical Sciences has very properly repudiated the judgment of his correspondent, and acknowledges that Dr. White's treatment of his case was not open to the cavils of the critic. And the judgment of nine-tenths of the American medical profession, who have read the paltry diatribe of the Philadelphia critic, will find no difficulty in coming to the conclusion, that the critic in attempting to write down Professor White, succeeded admirably in writing himself down. While we look with regret upon any attempt on the part of medical men to put down a member of the profession for an honest discharge of his duties, we rejoice that Dr. White has been amply vindicated, and triumphantly sustained.

In a recent number of the Buffalo Medical Journal, Professor Flint

has, in his usually efficient and masterly manner, vindicated his absent colleague from the false and improper aspersions that were thrown upon him by one who claims to belong to a noble, liberal and highminded profession. Professor Flint has done ample justice to the subject, and we thank him for the stand he has taken in favor of improvements in teaching medicine. We look upon every real advancement of the means of medical education, every real increase of the resources of medical instruction, as increased means of benefit to mankind, and among these increased resources we regard Demonstrative Midwifery worthy of a high place. We have seen and heard enough to know that demonstrations in that department of medical education are absolutely essential, and the only regret we feel in connection with the subject, is that the matter has too many inherent difficulties, without the aid of medical cavillers.

The editor of the American Journal of the Medical Sciences states that the judgment of the medical profession in Philadelphia is adverse to demonstrative midwifery. In common with Professor Flint, we were surprised at that statement, for we happen to know that some gentlemen who are regarded as quite eminent among the medical men of Philadelphia have expressed quite a different view from the one assumed by the editor of the Philadelphia Medical Journal. But, taking the statement of the editor for granted, we think, even if the medical men of Philadelphia were as unanimous as they are represented to be on this subject, that it would not be the first time in their history that they were in the wrong, They were nearly, if not quite unanimous in opposition to Dr. Shippen's effort to introduce Obstetrics into the hands of medical men. That was once denounced quite as bitterly in Philadelphia as Dr, White's critic denounces him, and we entertain no doubt that the wiseacres who opposed Dr. Shippen felt well assured that they were the light of the earth. The men who should now undertake to advocate the views of Dr. Shippen's opponents would run the risk of being looked upon as arrant quacks.

We feel that we owe these remarks to the character of a medical gentleman who has honestly endeavored to benefit his profession, and we are sure that he will be sustained by all who have the true interests of medical science at heart. B.

☞ Several editorial and other articles, prepared for this number of the Journal, are unavoidably deferred.

THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY.

EDITORS.

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AND

THEODORE S. BELL, M.D.

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THE

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OF

MEDICINE AND SURGERY.

APRIL, 1851.

ART. I.—*Epidemic influences, and the duties of the Medical Profession in relation to them.* By THEODORE S. BELL, M. D., of Louisville, Ky.

It is a matter of gratulation that in all civilized regions at this time, a number of leading medical minds are engaged in the all important duty of watching the phenomena attendant upon epidemics, and of recording facts upon the subject. At no period of medical history has there been more devotion to the highest interests of medical science, than at present, and the greatest results among the rich acquisitions of modern medicine, are found in the domain of public hygiene. Hygiene is one of the highest departments of medical philosophy, and he is totally unworthy to be a member of any branch of the medical professio n, who is unacquainted with the characteristics facts, and principles of modern hygiene. The ancients regarded a knowledge of the causes of things a source of peculiar felicity, but the physician who is ignorant of the causes of those matters that concern the health or

life of those who confide in him is an evil to himself and to the community. The pressure of the public suffering, the devastations of disease, and the consequent injury to the public prosperity, have, in Europe, forced upon the attention of the medical profession the demands of public hygiene. Large masses of gleaners are abroad upon the fields of disease, gathering facts, and enforcing truths upon the minds of the rulers of the land. Chairs have been established in the medical schools of portions of Europe, the occupants of which are devoted to the cause of the public health. The political rulers of England, France, Austria, Prussia and Russia have shown a commendable zeal in this great work, and have clearly recognised the great and important truth, that the protection of the health of the community is a duty of Government. The reports of the Registrar-General of England are invaluable in showing the sources of endemics, and the ease with which they may be removed. A great deal of labor has been bestowed upon the sources of disease in England; and a most commendable zeal has been displayed, in the construction of a system of public hygiene, that is honorable alike to English medicine, and to the cause of humanity. The medical periodicals of Great Britain teem with publications on this high interest, and abundant proof is accumulating to show that the mind of the profession is properly directed and is engaged in the pursuits that belong to it, and that are conducive to the good of the people.

The position of American public hygiene, we regret to say, is not of that exalted character that it should have attained. There is but little zeal, devotion or care on the subject, and communities are permitted to live in open defiance of sanitary laws, and to build up, and chain sources of pestilence, lest some accident should cut them adrift. Many years ago, Dr. Rush proclaimed, in his usual eloquent and energetic style, the great truths: "*to*

all natural evil, the author of Nature has kindly prepared an antidote. Pestilential fevers furnish no exception to this remark. The means of preventing them are as much under the power of human reason and industry, as the means of preventing the evils of lightning and common fire." American physicians entered upon the course indicated by Dr. Rush, and in portions of the country their labors were efficient and successful. Many eminent teachers and writers had definite ideas of the cause of fever, and of the means of preventing them, and they exerted themselves in the work of prevention. But that the principles of public hygiene were not generally understood, nor promoted, is abundantly proven by the history of epidemic cholera in the United States. Instead of gathering facts in order to see whether that disease might not be an old enemy in a new disguise, the idea was at once adopted that epidemic cholera was a new disease the cause of which was unknown, and could not be traced. The wildest hypotheses sprang up in the midst of the bewildering phases of the epidemic, and any conjecture, however untenable, was deemed more trustworthy than the soberest truths. The contest seemed, for awhile, to be, to try who could stray farthest from the paths of the inductive philosophy, and, it must be confessed, that many were remarkably successful in their efforts. If the great mass of American physicians had studied the habitudes of the great pestilence, from 1832 to the present time, in the only way they should be studied, the profession would occupy a much higher position on the subject, than it now commands. Facts have accumulated abundantly, on the cause of cholera; they speak but one language, and that is clear and conclusive. These facts are of no dubious import, no matter whether they are gathered on the banks of the Hoogley, amidst the brackish pools of Kastan, the passes of the Balkan, the sewers and cess-pools of Lon-

don, in the wet and filthy squares of Louisville, or upon the decks of Western steamboats.

The season for Epidemic Cholera is approaching, and it is a matter of public duty to arouse attention to the necessity of preventive measures. Even with all the information that has grown under the influence of carefully recorded observation, even in the presence of the most incontestable proofs of the value of that information in its striking and successful results, it is lamentable to think how much remains to be done, in the improvement of the sanitary condition of large sections of the country, and how incessantly the medical writer who recognises his duty, is compelled to urge the claims of health upon the public attention. Even when he succeeds in awakening attention to the demands of the subject, unceasing vigilance is necessary, lest the attempts at improvement may be so badly managed as to increase the very evil they were intended to prevent. The claims of the subject are large, the labors required to meet them are great, but in the discharge of the duties of public hygiene, no labor, that is essential to success, can be too great. The truths of that science are a gospel for the corporeal part of man, and, for that, are what the Apostle Paul said he was—a savor of life to life to those who believe, and of death to death to those who reject the truth. It is appalling to look over the earth, even in the best regulated communities, and see every where the most shocking disregard to the plainest and most palpable dictates of ordinary reason and common sense in matters concerning the public health. It is dreadful to look upon communities standing upon the verge of disaster, where a change in the impalpable matters of breath, over which changes men have no dominion, may convert health into disease, and disease into death. When we read of the sword of the Syracusan tyrant, suspended over the head of Damocles, by a hair, we naturally conclude that we should have hastened from

the unhealthy region; but do we not see communities sleeping quietly under threatening dangers suspended by a tenure quite as precarious as that which held the sword over the head of Damocles?

The duty of the public hygienist then is clear and indisputable. As long as the necessities for his truths exist, he must press them home upon the public. He must purify the air by the lustrations of his facts, and build up confidence in his mission, by the successful results of his labors. In the performance of this duty, I shall take the habitudes of cholera, as illustrations of the hygiene truths, which it is the purpose of these remarks to enforce.

In 1832 I first became acquainted with cholera, and it roused in me a very sincere desire to understand it thoroughly. In the works of Senac, Torti, and Morton, I had read of diseases precisely analogous to this, but the latter was called a new pestilence. Senac called his cases Malignant intermittents, Torti and Morton called theirs, Pernicious fevers. In comparing the accounts they gave of those diseases, with what I saw in the disease called cholera, it was palpable to me that there was not an essential feature of the disease known as Pernicious fever that was not present in cholera, and after a very patient and thorough analysis of the whole subject, in perfect conformity to those rules of philosophising which Bacon and Newton announced, and which all experience has confirmed as true principles, I felt persuaded that epidemic cholera was the product of that combination of solar heat, moisture and dead vegetable matter, which has been made familiar to medical men by Lancisi. This conclusion was not rashly made; the responsibility of announcing this result was well weighed, and under a due sense of that responsibility, I declared the truth in the Transylvania Medical Journal for 1832. At that time the medical mind, nearly all over the world, was bewildered as to the

cause of the pestilence. Error as to the cause was rife and baleful; the ignorance that repudiated all knowledge of the cause was scarcely less baleful. It was difficult then, as it is now to imagine how men could shut their eyes to the facts that uttered no uncertain sound, and which spake no dubious language. It was evident then that medical men preferred talking of the mysterious character of what had no mystery about it, rather than make a bold and studied effort to remove the mystery. A distinguished contemporary has uttered a truth of no ordinary import in the following language: "in medicine, loose and imperfect statements are little less hurtful and misleading than positively false ones." Who has not often felt the force of this truth in his search after medical truth? Let us impress this matter by a notable and recent instance in our own country. The Philadelphia Board of Health, in their report of 1849, use the following language: "the appearance of the cholera at Staten Island (New York,) and its almost simultaneous outbreak at New Orleans, is one of those peculiar coincidences *which will forever be shrouded in obscurity.* Carried into both ports by emigrant ships from Havre, where when they sailed there was no cholera known to exist—the one leaving on the 3d of November, and the other on the 9th, following nearly the same track, the disease appearing at sea on the 25th November, in one, and on the 28th in the other, *when most probably in the vicinity of each other*, crowded with emigrants, uncleanly and badly ventilated. The inference is that they must have passed through a stratum of atmosphere loaded with some peculiar influence which, under favorable circumstances, produced in both cases the cholera poison." There is reasoning with a vengeance—the appearance of cholera at Staten Island and New Orleans, almost simultaneously is one of those coincidences that will forever be shrouded in obscurity, but the coincidence of the attack of two ships, which are guessed to have been, at the

time, in the vicinity of each other, admits of an easy inference—the Philadelphia Board of Health rush to a conclusion with railroad celerity—"the ships must have passed through a stratum of atmosphere loaded with some peculiar influence," etc. Now, why consign one of the coincidences to a never ending obscurity, instead of guessing through it, as in the other case? Would it not have been quite as easy to guess that a stratum of atmosphere loaded with pernicious influences settled down precisely on Staten Island and upon New Orleans, about the same time, as to manufacture this stray waif of atmospheric poison for the two ships at sea, which might not have been in the vicinity of each other? Is it any wonder that the public hesitate in granting confidence to such extraordinary reasoning, such miserable guesses, such palpable absurdities as those contained in the extract quoted from the Report of the Philadelphia Board of Health? Would it not be wonderful if the Board itself, had any faith in their own precious and marvellous philosophy? And is it from such experience, such philosophy, such wild and inexcusable dreaming, as that of the Philadelphia Board of Health, that a sound and reliable system of sanitary truths can spring? If so, it must be hoped in a system of compensation—as they started a stratum of air loaded with cholera poison, to attack the two emigrant ships, at sea, they may have strayed away from their poisonous waif, towards the truth, and reached it by accident. The quotation made from the Report of the Philadelphia Board of Health is an excellent illustration of the truth quoted from the British Foreign and Medico-Chirurgical Review,—"in medicine loose and imperfect statements are little less hurtful and misleading than positively false ones."

Let the light of truth now look into that awful shroud of never-ending obscurity, of which the Board speaks, and see whether the mystery is so very impenetrable. I

pray the reader's very particular attention to the facts, which high medical authority declares are shrouded in total obscurity, The case before us is full of instruction of the highest importance, the facts are clear and indisputable, and if the inferences deducible from them are not palpable, it would be scarcely worth while for the profession of medicine to have facts—they are useless, if they cannot be used.

The statement of the Philadelphia Board of Health is that there is a profound mystery in the fact that two ships should have had cholera upon them, in the midst of the Atlantic Ocean, when the port from which they had sailed was free from the disease, and nothing of its existence was known at any of the points from which the emigrating passengers had started. Now there is no more mystery in these facts than there is in an outbreak of yellow fever, or any other disease that springs from a local cause on board of a ship, and medical history is filled with examples of this kind. The very fact that numerous other ships were sailing in the same regions that were traversed by the two cholera ships, and escaped a visitation of the pestilence, should open the eyes of medical philosophy to the possibility that the cause may have been local, and the conditions for its production must have been confined to the ships that exhibited the effects. There is certainly nothing irrational in this view, nor is there anything illogical in this train of reasoning. How a waif of cholera atmosphere could have struck these two ships alone, and at a distance from each other, and permitted all others to escape, is a point of serious enquiry, especially as we not only have no evidence that a cholera atmosphere can travel across water, but the evidence is conclusive that it cannot. And then there are facts that show that the cause of cholera on board one of the ships under review, the New York, was confined in its operations, and that it could not have lain perdu in the atmos-

phere, until it dropped down upon the devoted ship. *Not one of the cabin passengers on the ship had the disease.* We are required to believe that the passengers of one of the infected ships inoculated the citizens of New Orleans with cholera, and caused an awful epidemic, but in doing so we must shut our eyes to the fact that the cholera victims of the packet New York could not inoculate the cabin passengers confined to the same vessel. But we cannot reach truthful conclusions, by shutting out facts—the whole subject must be surveyed, and carefully analysed.

But let us dispose of the case of the packet ship, New York. She arrived at Staten Island, on the 2nd of Dec. 1848, and had had cholera aboard for the space of seven days, among the emigrant passengers in the steerage. The remaining steerage passengers were placed in quarantine, at Staten Island, in the public stores on the Dock. Numbers broke the quarantine, and escaped into the city. In a crowded and filthy German boarding-house, two fatal cases occurred—the place was at once cleansed and purified, and the occupants, two hundred in number, were scattered over the city. In a German boarding-house of a more respectable character, a case occurred, which could not be traced to any medium of connection with the emigrants on the packet ship New York. One of the supposed emigrants went to a building accupied as a convalescent hospital for typhus patients. He did not communicate the disease to any of the inmates of the hospital. "This," says Dr. Buel, to whose paper on the subject I am indebted for these facts, "it is believed, terminated the first brief chapter in the cholera of 1848." A sharp frost closed its operations in the city of New York, in December, 1848, for Dr. Buel says, that the weather in that city, though mild and temperate, was wintry.

But let us now turn our attention to New Orleans, and see if local causes have anything to do with cholera. Dr.

Fenton dates the appearance of cholera, in New Orleans, in 1848, on the 11th of December, and makes it coincident with the arrival of the ship "Swanton." We shall look at this point directly. The ship "Swanton" had two hundred and eighty steerage passengers, consisting of German and French emigrants. If the presence of cholera in New Orleans was due to infection from the ship "Swanton," we must find, upon clear and indisputable evidence, that there was nothing like cholera at New Orleans, antecedent to the arrival of the vessel, and we must also have an approximation to the state of things in New York, under the infliction of an analogous cause. A ship arriving in New York with small-pox among the passengers would produce very much the same occurrences in New York that would take place in New Orleans, under a similar arrival.

"For several weeks previous to the arrival of the 'Swanton,'" says Dr. Fenton, "the weather had been changeable, *for the most part very warm*, though there had been several white frosts. Yellow fever had almost disappeared, and there was but little sickness prevailing; though, *among the existing diseases, were observed some remarkable cases of stomach and bowel complaints.* On the 5th of December, (six days before the arrival of the "Swanton,") I attended a gentleman on Custom-house street, who labored under vomiting, pains and spasms in the bowels; and prostration to such a degree, that, if epidemic cholera had been supposed to be here, no person would have hesitated to pronounce him a case." [Are we to infer from this that it is necessary that numbers of cases shall occur, in order to decide the nature of an individual case?] "He had no rice-water evacuations, his bowels were rather costive, and he vomited bile; but many such cases have been seen since the epidemic was declared."

"Some days previous to this, three or four negroes were attacked with cholera morbus on the same night, in

Gravier street—they were promptly treated, and all soon recovered, similar cases were observed in the practice of a number of physicians in different parts of the city, all going to show, as it appears to me, that the *epidemic influence of cholera was gradually being matured in our midst.*"

The ship "Guttenberg," from Hamburg, where cholera was prevailing, arrived at New York, five days before the "Swanton." Cholera appeared among the passengers of the "Guttenberg," before she left the Elbe, but as soon as the vessel got out to sea, the disease subsided completely and no more cases occurred during the whole voyage.* There is certainly nothing unreasonable in the presumption that, as cholera was prevailing at Hamburg, at the time, and the passengers of the "Guttenberg" got on the vessel at that city, and all the cases occurred before she got out of the Elbe, the cause was local, and originated at Hamburg. After getting out to sea, the disease subsided completely, showing there was no local cause on the ship. How she managed to escape that wandering waif of cholera atmosphere so poetically imagined by the Philadelphia Board of Health, and so accurately located in the neighborhood of Nova Scotia, we are at a loss to imagine. She was in that region about the time the packets "New York" and "Swanton" were.

But let us return to the "Swanton," one of the ships attacked by the stray waif of the Philadelphia Board of Health. This vessel was out from Havre twenty-six days before a death occurred, the first being from *consumption*, on the 28th of November. After this sixteen or seventeen deaths occurred during the passage, most of them from bowel complaints, *supposed to be from dysentery.* If they were supposed to be from dysentery, it is self-

* Fenton's Southern Reports.

evident they could not have been from cholera, for none but an idiot could confound the two diseases.

On the day after the arrival of the "Swanton," at New Orleans, a woman was carried from the ship to the Charity Hospital, and found to be in a complete state of collapse. It was at once decided to be a case of Asiatic cholera. On the following day, another case from the ship, was carried to the hospital, in a complete state of collapse. *Three other cases of cholera, from different parts of the city, and not of the ship*, were admitted to the hospital, on the day this case entered. On the evening of the same day, a gentleman having business near the St. Charles Hotel, called on Dr. Fenton, with strong symptoms of cholera. He had not been near the ship Swanton, nor had he seen any of her passengers.

On the 15th of December, there were eight cases of cholera admitted into the Charity Hospital, and Dr. Fenton heard of cases in the private practice of a number of physicians. The intelligent reader cannot fail to see the material differences between the results in New York and New Orleans, four days after the arrival of the vessels at the respective ports. And can there be any difficulty in ascertaining whether there were differences between the two cities in any particulars connected with the production of disease, that may account for the differences in the results? Is it not given to the reason of medical men to find a solution for problems of this kind? Has medical experience accumulated no certainties on the subject of the cause of disease? Does eternal night reign over medical facts alone? Do the changes of seasons affect vegetable life, and produce no effects on animal life and animal health? These are questions of momentous importance to every medical man, and should be carefully studied, analysed and directed in their channels. I shall consider them directly—the facts reported by Drs. Buel and Fenton are reported so clearly and faithfully, that

they are perfectly reliable. As an evidence of the care necessary in considering facts, the following specimen, selected from a large number of reputed cholera facts, is recorded by Dr. Fenton. It is very expressive.

A learned physician of New Orleans, addressed a letter to a distinguished Professor in Paris, which was published in one of the New Orleans papers, in which the writer mentioned three fatal cases of cholera, that occurred on Custom-house, Bienville, and Chartres streets, on the 15th of December. The writer adds: "It is well enough to remark here, that these three primary victims of cholera in New Orleans were all cooks, going every morning, very early, to the principal market in the city, situated on the bank of the river, a cable's length from the infected vessel." These are not only "loose and imperfect statements," but "positively false ones." The ship Swanton, from which these statements were intended to show the New Orleans cases of cholera were derived, instead of lying a cable's length from the principal market, was *at the upper end of the Second Municipality*, nearly a mile from the principal market frequented by the cooks. It is by the manufacture of facts in this way, that truth is hidden, and falsehood sustained, and if there is any one earthly thing, a thing merely earthly, in which truth is a priceless gem, it surely is in the causes that produce epidemic diseases. If we cannot at all times ascertain the causes satisfactorily, it is not difficult in any case to ascertain the accompanying phenomena. Even these are of some value, because partial knowledge is better than complete ignorance. If all men could agree upon the facts of cholera, a system of sanitary regulations could be adopted that would afford security against the ravages of the disease. It "is the pestilence that walketh in darkness" that takes communities by surprise, not the one that walks in light.

The facts already detailed constitute a starting point for investigation, and before passing to the accumulation of any more, it will be well enough to pause and see those before us. What are they? On the 5th of December, a vessel with cholera on board, arrived at New York; the passengers being quarantined, the disease continues to prevail among them. Numbers break the quarantine and escape into the city—two of these die with cholera—one in a crowded German lodging-house, another in a convalescent fever hospital in the suburbs. Two other fatal cases occur, and immediately after they occurred, a sharp frost comes, and there was no more cholera in New York for months. Those who had been exposed to the local cause took the disease and died—there was no local cause scattered about New York, and the disease did not spread over New York—it is, therefore, abundantly evident that the existence of cholera on board of a ship, is not sufficient to produce cholera among the inhabitants of the port at which she lands, for if such a cause were equal to the production of such effects, the city of New York should have been visited by cholera, in December, 1848. This palpable truth should always be remembered in considering facts that have the *appearance* of militating against this view. The same cause, under the same conditions, will always produce the same effects. We shall have plain sailing if we stand by established principles, and make a wide survey of the facts.

Let us now look at the New Orleans facts. We find that weeks before the arrival of the ship Swanton there was a predisposition in New Orleans to disorders of the bowels—Dr. Fenton says, that "among the existing diseases were observed *some remarkable cases of stomach and bowel complaints*," and Dr. Fenton attended a case with symptoms so nearly resembling cholera, that if that "epidemic had been supposed to be in New Orleans, there *would* have been no hesitation in pronouncing this a case

of that disease." In truth it was a sporadic case of cholera, and this shows that a cause of cholera was in operation before the Swanton reached that port. Here then is a marked and striking difference between New Orleans and New York, and there was an essential difference in another particular—Dr. Buel says that the weather in New York, though mild and temperate, was wintry—Dr. Fenton says: "the weather in New Orleans was changeable, *for the most part very warm*, though there had been several white frosts." The explanation is palpable: there had been weather warm enough to produce the remote cause of cholera, but frost enough to check, modify and, to some extent, control an outbreak of the disease, and all that was needed was *uninterrupted* warm weather to produce epidemic cholera, in the winter months. In New York, not only the months were wintry, but the weather was also, and cholera did not spread, but in New Orleans, a widely varient state of things existed.

Some days previous to Dr. Fenton's case on the 5th of December, three or four negroes *were attacked in the night* with cholera morbus—similar cases were observed in the practice of a number of physicians in different parts of the city, all going to show, as Dr. Fenton very philosophically and logically says: "that the epidemic influence of cholera was gradually being matured and developed in our midst." Dr. Fenton speaks like a philosopher in that sentence. How different the conduct of those who look for the cause of disease in an imaginary stray waif floating in the atmosphere of the ocean, or to some distant land, or in an assumed infected air in a newly arrived ship, instead of using their common sense upon the palpable truths around them.

In New Orleans the weather increased in warmth, and epidemic cholera gained ground. From the 16th of December to the 22nd the weather was "*oppressively warm*," the thermometer rising, according to Dr. Fenton, to 84°.

On the 23d of December the Board of Health announced that cholera was epidemic in New Orleans; it raged severely from the 22nd to the 30th, there being *ninety-two* deaths on the 28th. Citizens of Louisville who were in New Orleans between the 16th of December and the 22nd, say that the weather was so hot that the air was stifling in its effects. From the 22nd to the 30th the weather was cool, wet and gloomy, thus making a general exciting cause for the development of the effects of the remote cause which was acting during the hot weather. From the 12th of December, 1848, to the 20th January, 1849, there were nearly fourteen hundred deaths by cholera, in New Orleans.

We have thus ascertained that as the temperature increased the cause of cholera increased, and the scale for judging this fact, is the safe one found in the effects. If the cause was dependent upon the warmth of the weather, parity of reasoning would show that cold weather would check the cause. Did this actually occur? That faithful observer, Dr. Fenton, says it did. He states: "On the night of the 30th there fell a white frost. On the morning of the 1st of January, there was another white frost, and from that time, the disease steadily declined." While the epidemic lasted, its influence was almost universal—nearly every person in the city felt it to some extent.

These facts, then, press home valuable truths to the mind of the intelligent reader. The cause of cholera was not introduced into New Orleans by the ship Swanton, for it was in operation there before that vessel arrived, about the time indeed that the errant atmosphere of cholera was said to be dropping upon the Swanton in the neighborhood of Nova-Scotia. But if we admit the fact that the Swanton introduced cholera into New Orleans, we remove no difficulty; we unshroud no obscurity. The question recurs upon our fancied gain—why did not the packet ship New York introduce the disease into the

city of New York? Why were there only four deaths in that city, and fourteen hundred in New Orleans? It is plain, in the presence of such questions as these, that we gain nothing by the admission that New Orleans was infected by the Swanton. We make no advance, by ridding ourselves of one set of meshes, and becoming involved quite as deeply in that of another. The man who steps out of one miry place into another does not improve his condition.

But proofs accumulate in establishing the local origin of cholera. We have seen that the disease could make no headway in New York, during the cold weather, and that during oppressively warm weather in December, in New Orleans, it made a frightful headway. While cold weather lasted in New York, the disease was a nonentity, but as soon as warm weather began to act in conjunction with moisture and decayed filth, cholera began in New York as it had done, in similar circumstances in New Orleans, in the previous December. On the 11th of May, 1849, cases began to occur in the vicinity of the "Five Points." The filthy tenements occupied by the victims, beggar description, and Dr. Buel says: "the small area unbuilt upon is covered with black pools of filthy water." Dr. Buel adds: "at my first visit, on the 16th of May, five human beings, one man and four women, lay upon the floor, in different stages of cholera. There was nothing under them but mud and filth, and nothing over them, but a few rags of the filthiest condition." In fourteen days the pestilence had not extended itself more than 100 yards from its origin, nor had it numbered more than about 20 victims. In New Orleans, in 17 days from the commencement of cholera, the deaths amounted to forty-five. As the weather increased in warmth, the disease spread and raged in both cities. From the 5th of December to the 16th of December the temperature gradually increased, and cholera increased slowly; from the

16th to the 22nd of December the weather was oppressively warm in New Orleans, and cholera increased rapidly in its ravages, and spread itself over the city, and on the 28th reached its zenith. In the city of New York the temperature increased gradually, in May, and cholera increased gradually and slowly. Dr. Buel says: "during the first seven days of June the weather became warm, and the disease spread rapidly in all directions. Within this period 70 cases were received into the hospital, being double the whole number admitted during the whole previous time the hospital had been open. At the end of the first week in June, or about twenty-eight days from the appearance of the first case, the pestilence had become pretty extensively and generally diffused over the city. At the end of the third week in July, or about seventy-two days from its first appearance, it had arrived at its "culminating point." In New Orleans the increase of the temperature, after it began to rise, was rapid, and intense, and a corresponding state of things existed in the march of cholera. The disease in New Orleans was checked by a sudden check of the summer temperature. In New York the temperature and disease increased gradually and uniformly. Its decline depending upon the diminution of one of the elements essential to the production of the cause of cholera—moisture, was gradual and uniform, but more rapid than its increase. In New Orleans the element removed was solar heat, and as the removal was sudden, the effect was as sudden as could be expected where many had imbibed the cause without having succumbed to it, up to the time the farther production of the cause was stopped. In New York, the element removed was moisture, and that was removed more slowly than the solar heat was in New Orleans, consequently the cause ceased its operations more gradually. In the production of the cause of cholera, too much moisture plays the same part that too small an amount does.

It is a great misfortune for the world, and not a limited evil to the medical profession, that such faithful observers and truthful chroniclers as Drs. Buel and Fenton have not been more abundant. Under their luminous details, there is no kind of difficulty in tracing the origin and foot prints of epidemic cholera. If such minds had originally surveyed the pestilence, the profession of medicine would not have been groping in darkness amidst such follies as contagion, infection, portability, stray waifs of atmosphere at sea, telluric sources, animalcular origin, ozone *ignes fatui* and the various other bewildering phantasies in which the medical mind has revelled. Medical observers in various parts of the world, in some degree resembling the excellences of Drs. Buel and Fenton, are beginning to abound, and cholera records are becoming as uniform now as they were formerly discordant.

The malarial origin of epidemic cholera, upon which I started almost alone in 1832, can now boast of numbers of powerful advocates. There can be said of it, what cannot be said of any other cause that has been assumed for cholera. It is the only cause that harmonises with the facts; it is the only cause that has given birth to sanitary laws that have been successful in their operation, and it is the only cause that has enabled men to make predictions that have been verified by the events. On this point I shall speak more fully hereafter.

In the early part of last autumn, I consented to prepare a paper on the history of cholera, its cause, &c., for the pages of a quarterly periodical in the hands of a large and popular denomination of Christians. In that article I introduced a notice of some of M. Quetelet's results of th Theory of Probabilities, and I am gratified to find that their value is attracting the attention of other medical writers. Dr. E. M. Pendleton, of Sparta, Ga., in a paper prepared for Dr. Fenner's 2nd volume of Southern Medical Reports, speaks favorably and encouragingly

of M. Quetelet's labors, and of their uses in vital statistics. I think the attention of the profession cannot be too earnestly directed to what may be done for the philosophy of medicine, by a rigid and discreet use of the Theory of Probabilities, and I here republish my remarks, made in the October No. of the Quarterly Review of the Methodist Episcopal Church.

Those who have paid much attentlon to the exact sciences are familiar with the rapid growth of the department of calculation known as the Theory of Probabilities, applied to moral and political matters. This calculus owes its origin to Pascal; but in his hands the conception was crude, compared to the form it assumed under the amazing powers of Laplace. The results of the unrivalled processes of Laplace, in developing the Theory of Probabilities, have been of the greatest advantage in many departments of statistical knowledge, and are destined to the fulfilment of many hopes and desires in national affairs. Among those who have advanced the subject beyond the boundaries of Laplace, M. Quetelet, Perpetual Secretary of the Royal Academy of Brussels, is conspicuous. In 1835, he published two admirable volumes, entitled, "On Man and the Development of his Faculties," which opened up a mine of investigation that has been productive of the greatest benefit. The wonderful achievements of M. Quetelet, in statistics, that present to the common eye nothing more than a congregation of the merest accidents—a chance-medley without rule or law, but which, under the analytical principles of the calculus, assume regularity, order, and precision, of the most astonishing character, are among the magic creations of the new science. Our first acquaintance with the works of M. Quetelet, commenced in the Edinburgh Medical and Surgical Journal, for 1837; since that time we have watched his progress with great interest, and his great work, entitled, "*Lettres à* S. A. R. Le Duc, *règnant*

de Saxe-Cobourg et Gotha sur la Thèorie des probabilités applique aux science Morales et Politiques," is one of the profoundest interest to all who study society, either in detail or under generalization.

There are two principles or laws of Probabilitiy, which were first demonstrated by Bernouilli, and they may give the general reader some idea of the nature of the subject. The first, according to the Edinburgh Review, is:—

"That in any vast number of trials, there is a demonstrably greater probability that the events will happen in numbers proportional to *their respective chances in a single trial*, than in any other *specified* proportion; and secondly, that a number of trials may always be assigned so great, as to make the probability of the events happening in numbers, falling within any assigned limits of deviation from that proportion, however narrow, approach to certainty as nearly as we please."

It is impossible to explain, within the confined limits of this essay, even the principles of the laws of Probability; but though debarred from showing their admirable working, a glance at a few of the results may serve to show the accuracy of the calculus, and its important bearing upon society. If we look upon individual examples of marriage, of the proportion of births of legitimate and illegitimate children, and every thing of that kind, we should be led to infer that the returns of various years would show great varieties in the proportions. But listen to the Edinburgh Review, upon what M. Quetelet has shown by his calculus. That Quarterly says:—

"As instances might be cited, the relative proportion in the births of the sexes already spoken of; the ratio of illegitimate to legitimate births in the same country, and the same section of the population; nay, even the number of the still-born (with a distinct per centage for town and country,) which M. Quetelet has ascertained to be so uniform in Belgium, that, on a total number of nearly 6000 annual cases, the yearly deviation of the mean falls

short of 140; the ratio of marriages to the whole population, of second marriages to the whole number of annual marriages, and still more minutely, of widowers with widows, widows with bachelors, and widowers with spinsters; the relative ages of parties intermarrying; and innumerable other particulars; all which, free as air in individual cases, seem to be regulated with a precision, where masses are concerned, clearly proving the existence of relations among the acting causes so determinate, that there is evidently nothing but the intricacy of their mode of action to prevent their being subjected to exact calculation, and tested by appeal to fact. Taken in the mass, and in reference both to the physical and moral laws of his existence, the boasted freedom of man disappears; and hardly an action of his life can be named which usages, conventions, and the stern necessities of his being, do not appear to enjoin on him as inevitable, rather than to leave to the free determination of his choice."

The uninitiated are scarcely prepared for such revelations as these. They are truly astonishing, but they are the mere A. B. C. of M. Quetelet's developments; and we are convinced that even in the hands of that great expounder, the Laws of Probability are yet in their infancy. The future will exhibit their extraordinary revelations in husbandry and in medicine. The inflorescence of plants has been determined under the laws promulgated by M. Quetelet, and their fructification, and other phenomena will be, in time. Boussingault and the Abbè Cotte, have announced "that the arrival of a plant at a definite stage of its growth, is solely dependent on the *total amount* of temperature to which it has been subjected from the first movement of the sap in spring, without regard to its distribution over the intervening time, or the extent of its variations." M. Quetelet proposes, *instead of the sum of the daily mean temperatures, the sum of the squares* of each daily mean, reckoned from the freezing point, "because

the force exercised by the temperature is of the same nature as actual force. It is by the sum of the squares of the degrees, not by the simple sum of the degrees, that we must appreciate its action." For instance: "It is found that the common lilac blooms as soon as the sum of the squares, *of the mean daily temperatures*, as indicated by the centigrade thermometer, amounts to 4264°, so that the mean time of its flowering at any given station, may be at once determined from the meteorological records of its climate. *At Brussels, this mean date is the 27th or 28th of April. In other localities, it occurs earlier or later, by about three or four days for every degree of latitude south or north of Brussels, and about five or six days later for every hundred yards of elevation above the elevation of that city, which is itself sixty-five yards above the sea.*"*

But let us return to M. Quetelet:—

"To each plant" (thus he states his general conclusion) "is attached a constant—the square of a certain number of degrees of warmth necessary for the occurrence of 'inflorescence.' Whether a plant is found in such and such a latitude, at such and such a height, in the open air or in a green-house, it is the temperature" (so measured) "that must be considered. Thus are explained all the anomalies that present themselves in this kind of research. Geographical causes have no influence but by the variations they cause in temperature."

We have marked a portion of one of the above quotations in italics, and we pray the reader's strict attention to the facts there detailed. They have an important bearing on the isothermal lines of disease, and will be useful when we reach that part of the subject.

We have dwelt upon the doctrine of the Laws of Probability, not only on account of the intrinsic value of the

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* Edinburgh Review.

subject, but for the purpose of pointing out its bearing upon medicine. After looking at the results of the calculus in statistical affairs, in their moral and political relations, we should suppose *á priori*, that the Law of Probability could be applied most successfully to medical reports, in all the various departments of medical science. But alas! even the master hand of M. Quetelet starts affrighted at the undertaking. The following remarks of Dr. Holland, of England, in his work on Medical Evidence, impressed themselves on our mind, years ago, and we indulged the confident hope that land was in sight. The Edinburgh Review quotes Dr. Holland as follows:

"A very special advantage has been the application of numerical methods and averages to the history of disease; thereby giving it the same progress and certainty which belong to statistical inquiry on other subjects. Averages may in some sort be termed the mathematics of medical science. The principal is one singularly effectual in obviating the difficulties of evidence already noticed; and the success with which it has been employed of late by many eminent observers, affords assurance of the results that may hereafter be expected from this source. Through medical statistics lies the most secure path into the philosophy of medicine. The inquiries which so greatly distinguish M. Louis, as a pathologist, may be noted as eminent examples of this method, which is now pursued with eminent success by many eminent physicians in our country.'

But M. Quetelet despairingly says:—

"All reasonable men will, I think, agree on this point, that we must inform ourselves by observation, collect well recorded facts, render them rigorously comparable before seeking to discuss them with a view of declaring their relations, and methodically proceeding to the appreciation of causes. Instead of this, what do we see? Observations incomplete, incomparable, suspected, heaped

up pell-mell, presented without discernment, or arranged so as to lead to the belief of the fact which it is wished to establish; and nearly always it is neglected to inquire whether the number of observations is sufficient to inspire confidence."

That there is a great deal of truth in the remarks of M. Quetelet, we are not disposed to deny; but there is room also for considerable qualification. The records of medicine are not quite so barren as they are represented to be, nor are they filled with more contradictions than the records of other sciences. Of all the liberal professions, as the phrase goes, medicine is the most thoroughly free. The lawyer is confined by precedents, rules of practice, and time-honored formularies, and he loves the narrow precincts in which he is confined; the clergy feel the restraining influences of the tenets held by the particular party for whom they labor; but in medical science, every man is free to utter such opinions as he may please—those that are valuable are ranked as authorities, those that do not command medical favor and confidence, may find their way into the hands of general readers; and they being indifferent judges, may ascribe great credit to what is entitled to little or none. In this way, such inquirers as M. Quetelet may make grievous mistakes in medical investigations. It is not at all likely that he has studied the works of such men as Louis, Andral, Grisolle, Chomel, Armstrong, and Stokes. If he has studied them profoundly, he has reached a conclusion as to their merits, that varies widely from that of the profession who are qualified to be the best judges. The numerical method of investigating all medical subjects, has done much in its short career, for practical medicine, and it is destined to do much more. The present paths of investigation are leading to grand results. Great names are losing the authority they once possessed, and truth is considered the only master. As a proper corollary to this

subject, and an appropriate preliminary to the main question before us, let us briefly examine the positions of Sydenham and Lancisi.

Sydenham was, by common consent, the greatest physician of his age. As a practitioner of the Healing Art, he has rarely been surpassed. He possessed an inquiring mind of a very high order, and when we look at some of his methods of investigation, we are surprised that he left discoveries of the highest importance, to others who possessed scarcely a tythe of his abilities. It is not a little surprising, that with his great reputation, his industry, his careful observation of nature, and his devotion to truth, Sydenham was ignorant of the cause of all the principal diseases of which he treats. Under the veil of a phrase—"an epidemic constitution of the atmosphere"—he worked in darkness. What were the elements of that epidemic constitution; how it was produced; under what peculiar circumstances it showed itself, and by what means it might be prevented, were mysteries to him. He declared that certain disorders, the effect of the "epidemic constitution of the atmosphere," came as regularly every summer, as swallows do, but why they came in summer, he did not know. But while this glorious orb was sinking to rest, a star was rising in Italy, which was preparing to give light to many dark places. As Sydenham was retiring from his labors, Lancisi was qualifying himself for the great work he accomplished, with honor to himself, and benefit to all the succeeding generations of men. In 1717, he revealed to the world the principles of Sydenham's phrase—"the epidemic constitution of the atmosphere"—he conclusively established the elements and mode of its production, the circumstances that created, modified, and destroyed it, and, above all, plainly showed how its noxious influence may be avoided. This was a great step in the progress of medical science, and it may at all times be pointed to,

as an evidence of the inestimable boon conferred by medical philosophy upon the human race. But it is lamentable, that the truths of Lancisi's philosophy are not generally familiar to medical men; and that writers on medical subjects often grope in the dark, through their ignorance of what Lancisi taught. The ablest expounder of those views, since the days of the illustrious Italian, is, in our judgment, Professor Caldwell. In not a very limited examination of the medical literature of the past century of years, we have found nothing on the subject of malaria, comparable to the teachings of Professor Caldwell. They are scattered through various treatises that owe their origin to his remarkable abilities, and are worthy the careful study, not only of physicians, but of all who concern themselves with the public welfare. The principles taught by that great master of the subject, are the basis of all the modern sanitary regulations that are founded in reason, and commended by success. The whole subject will pass in review, in the development of the history, progress, and cause of cholera, and to that we turn our attention.

We feel confident that the "Theory of Probabilities," can be as successfully applied to the cause of a large portion of the diseases of mankind as to the phenomena of plants; and if M. Quetelet had investigated the cause of intermittent fever, (and his country presents a rich field for such an investigation,) as he did of the flowering of plants, he would have paved the way, at least, for more important results than any attained in the floral kingdom. There is not, in our minds, any kind of doubt, that the sum of the squares of the mean temperatures of a certain number of days, will as infallibly indicate the production of the malaria that causes a variety of diseases, as it will of the time of the "inflorescence" of plants. For the production of that malaria, certain proportions of moisture, dead vegetable matter, and sun heat, are essential;

and if either element is more important than another, it is the sun heat. We know that a certain amount of that, produces intermittent fever; we are constrained to believe that a longer continued term of that element produces graver forms of fever. For instance, yellow fever requires a continuance of tropical heat, for a considerable time, and that disease is mainly confined to what is called the tropical zone. Medical observers throughout the world, have before them a fruitful field for observation. By a careful series of investigations, we may learn to tell with the greatest precision, the approach of various maladies, in regions favorable to their production. Wherever a certain amount of decaying vegetation and moisture is to be found, in the spring of the year, we may take our starting point at the cessation of freezing weather, and find the sums of the squares of the mean temperatures that are essential to the production of intermittent, remittent, and continued fever, cholera morbus, dysentery, cholera spasmodica, with all their attendant trains of kindred diseases. In perfect accordance with that statement, which we marked above, on the effect of degrees of latitude upon the variations of the times of flowering of plants, is every well written record of malarial disease. That there are great variations in seasons, is a well known fact, and the phenomena of nature obey these variations. If the spring is backward, in its usual features, the products of the earth are backward, and malarial diseases are equally affected. If there is unusual summer heat, and an unusual fall of rain in a fertile region, while vegetable life is more than usually active, human maladies are also more abundant. It is by close observation of these natural phenomena, that we are able to foretell a healthy or unhealthy season; and in the ratio of the study of the revelations of nature, is the ability to know her intentions before they are uttered, and this ability is

due to the discoveries of Lancisi, which he published in 1717.

In order to make some approach towards an understanding of the character of the agent of sickness, first properly described by Lancisi, I beg leave to submit to the attention of the reader some personal facts that seem to bear strongly upon the cause of, what are called, epidemic influeuces. I hope that no one will so far misapprehend me as to suppose that the statements are made in any spirit of egotism—the sole object is to assist in the establishment of the fact that the cause of any effect must be known, when the most accurate predictions are made as to what that cause will or will not do, and when these predictions are made publicly, in different years, and under circumstances that perilled reputation.

In 1833, an endemic cholera was raging in Lexington with a fatality beyond anything that had ever been known in the West before. As it had attacked a place previously celebrated for its salubrity, fears were entertained that no place was safe from its ravages, and there was some consternation in Louisville. There was some cholera in Louisville, but it was so very limited in its range, that it would have excited but little attention, except for the condition of things at Lexington, and Simpsonville, the latter twenty-two miles distant from Louisville. In the midst of this state of things, I wrote a letter to Professor Yandell, at that time editor of the Transylvania Journal of Medicine, and I affirmed that the range of cholera in Louisville would be confined to the sporadic cases then occurring. The prediction was based upon the fact that previous to the date of the letter there had been no favoring circumstances for the development of a general malaria, and the season was too far advanced for the rains of that stage of the season to do much harm. These were the reasons given in the letter. It was also stated that cholera would be confined to the vicinity of marshes and

ponds. If the statements predicted had been postponed until after the disappearance of the disease from Louisville, early in the fall of that year, they could not have been improved in accuracy.

In the winter of 1849, while the cholera was in New York, among the passengers of the packet New York, and while it was raging in New Orleans in the manner described already in this essay; while the steamboats were almost daily arriving at Louisville with cholera cases aboard, who were scattered over various parts of the city, a great deal of alarm was created for the safety of this city. The statement was constantly made that cholera had been introduced into New Orleans by the Swanton, and the expectation that it might be introduced into Louisville by the steamboats from New Orleans, seemed reasonable and well grounded to many persons. In this state of things I thought it due to the public that its fears should be quieted, and that the philosophy of medicine should be vindicated, and in a popular and widely circulated newspaper of the city I announced that the fears of the public were groundless; that no matter how many persons might reach here from New Orleans, with cholera, and no matter where they might be housed, Louisville was in no kind of danger. We were too far advanced into the winter to begin to suffer from the malaria of the previous fall, and had not reached a temperature that could produce the cause of cholera locally. It was also announced that Louisville could have no indigenous cholera until May or June. Each and every one of these predictions was verified to the very letter—numbers of cases were landed here, from New Orleans, in January and February, the boats suffered severely in their upward voyages from New Orleans, but not in the slightest degree in going down from Louisville, and there was not an indigenous case in Louisville, up to the time covered by the prediction. When the design of making these

predictions was announced to a medical friend, he earnestly begged me not to hazzard so much upon so variable a matter as cholera, and he was assiduous in endeavoring to deter me from, what he considered, an adventure. But however variable cholera may appear to others, I knew that it had its fixed certainties, and I had unlimited confidence in what I knew of them. A sense of duty weighed down all personal considerations, and the announcement was published. The first victims in 1832, 1833, and 1849 were made in the same locality, and 10 square feet would have covered the space first assailed in the three years mentioned; I knew the conditions that caused those attacks, and I have never known of the occurrence of a case of cholera, without those conditions, and I am as well satisfied that there never was a case without them, as I am of the cause of small-pox.

The third prediction was made under peculiar circumstances. On the 24th of July, 1850, the people of Louisville were aroused by the news that a cholera, unprecedented in its fatality, in Louisville, had displayed itself in the lower end of the city. On the north and south side of Market street, between 10th and 11th streets, in a square not by any means densely populated, and certainly not pre-eminent among the squares of Louisville for its filth, there were fifty cases of cholera, and up to 11 o'clock, on the night of the 24th, there were thirty deaths. The news spread as though it rode upon the electric fluid, and consternation spread with it, even in this community, which is not notorious for its fear of disease. Vast numbers of persons were preparing for flight, and there were few who could boast ease of mind. Worn out as I was, by the performance not only of my usual professional duties, but with my labors as a member of the Board of Health, which labors had been earnestly invoked by the city authorities on the afternoon of the fatal 24th, midnight found me in want of repose. But I greatly feared the

result of the facts of the mortality, when they should be made known next morning, and I felt that it would not be right to go to sleep without preparing an antidote, and at 2 o'clock that night, I handed the manuscript of the following article to the night hand of the Daily Journal, and it appeared in that paper on the morning of the 25th:

The Plague Spot in Louisville.—The following lines of Byron give a fearful picture of the condition of a small spot in Louisville, if we except the numbers, on Monday night:

The city lies sleeping,
  The morn to deplore it,
May dawn on it weeping:
  Sullenly, slowly,
The black plague flew o'er it—
  Thousands lie lowly;
Tens of thousands shall perish—
  The living shall fly from
The sick they should cherish.

The city of Louisville slept on Monday night, little dreaming of the fearful revealing that Tuesday morning was to make. The general health of the city was so far removed from such a state of things as was developed yesterday, that few would have considered it possible for such a reality to burst upon the vision of Louisville. But the pestilence has shown in awful tones the truth of the remark of the Registrar-general of England, quoted a few days since by the Louisville Board of Health: "Cholera is a health inspector that speaks in language which nobody can misunderstand!" If intelligent medical inspectors, armed with less desolating powers than the one who has awakened the attention of the people of Louisville, had made an inspection of the narrow space between Tenth and Eleventh streets, on Market street, this pestilential visitation might have been avoided, if the statements of all medical records can be depended upon. We made a thorough inspection yesterday of the part alluded

to, and we could not have believed it possible before, that there was a spot in this city that had boldly defied all sanitary measures, and challenged pestilence to do its worst, in that narrow domain. All measures of hygiene that have done a noble work in other parts of this city were utterly neglected and scorned in this plague spot; yet of all other places we have seen none ever required the fullness of sanitary precautions more. And it devolves upon every man in the city to pay prompt attention to the subject now—we mean to-day. Let no one indulge the foolish dream that a noxious air that rises in the night and sweeps two sides of a street, for the space of an entire square, with the besom of destruction, is to be confined long to the source of its origin. It will gradually creep onward, extending the sphere of its desolation, striking down the strong man, the delicate woman, and the helpless child with equal facility, unless human wisdom and a prompt energy shall take the matter in hand at once. Let not the sun go down on a duty unperformed.

We carefully inspected the region yesterday where the pestilence rioted in its narrow boundaries, and any one who may do the same thing can be at no loss to account for the fact that cholera displayed such powers of havoc on Market street, between Tenth and Eleventh. We will endeavor to describe the region, and hope that we shall be able to make the matter plain without a diagram.

The space alluded to in these remarks was once the site of ponds, and was filled up for a street and for building lots. It is low and flat, with about as dismal a chance for drainage as the genius of pestilence could desire. It is known as "springy ground," against which the essay we published last week warns people as sites for houses. The rains of the spring and summer saturated with water all the dwelling grounds of the space we have described; the old pond bottom holding the water pent up; pools

stood under houses; cellars were filled with water—one smoke-house, just above Tenth street, had deep water in it, and in that lot three persons died, and the ground of the infected square was so boggy that a stick pushed into it a short distance would cause water to bubble up. Over this substratum of peril, in some places, were accumulations of filth from 16 to 18 inches deep.

Immediately west of this range, on the north-western side of Market and Eleventh, stands an old pond running diagonally across a square. On the eastern edge of this pond, between it and the plague spot, stands a rope walk, running from Market toward Main street, and between the rope walk and Eleventh street, running parallel with the rope walk, is a strip of earth made by throwing, for some years, the garbage and filth of the streets into the pond. This mass of decaying vegetable filth rested upon water—upon an old pond, the bottom of which holds water as secure as a porcelain wash bowl can, and upon this mass the unusual rains of spring and summer have beaten, until the moisture remained but a few inches below the surface, in full communion with a sunny temperature that almost reached tropical heat. The pond has been kept well filled with water until the last two months, during which time evaporation has gone on with rapidity, exposing a marshy border of some six or seven hundred feet. The shives of hemp were thrown from the hackling house of the rope walk into the pond, and a mass of them that was under water began to show itself in the light of the sun a few days ago, and in a putrid condition. It is difficult to conceive of a more pestilent malaria than that made from this source. While we were making this inspection, the wind was blowing from the west toward the east, inclining slightly to the south, thus blowing the exhalations of malaria from the pond, and directing peculiar violence upon the south side of Market street.

The numerous dwellers aronnd the pond, on the north

and south side of Market and the south side of Main street, in the adjoining squares to the seat of pestilence, from whence the wind blew the malaria of the pond, escaped, though much nigher the pond than the victims of the desolating scourge were. We were struck by the fact that a row of houses on the south-west side of Market and Eleventh, which stand some feet below the street, and have filth enough in and around them apparently to breed a pestilence of any given power, have nearly escaped thus far—that row is not in the direction of the winds we have mentioned.

The reader has now before him a pretty full description of the locality of the pestilence—amid its pools of water under the ground floors and cellars of the dwellings, back-yards saturated with water and covered with decaying filth, the marshy edges of the pond, and accumulated scrapings of the streets for years, the cholera sat brooding and hatching a pestilence, and a fearful one it is. Numbers rose yesterday with all the joys of life before them, and before the sun had reached its meridian they were locked in the icy embrace of death—numbers who were waiting upon the dead and the dying after dinner-time, did not live to see the sun-set. In that narrow circle of living beings, there were, up to 11 o'clock last night, fifty cases and thirty deaths—no case has yet recovered, nor shown any signs of recovery. Children that were playing about the floor, upon the entrance of the physician to see other patients, were attacked in his presence and prescribed for immediately, and all have alike died—those in whose cases prescriptions were delayed as well as those prescribed for immediately. The pestilence showed no respect to persons, time, nor medicines. All invocations for relief ended in death. An industrious workman in one of the founderies was summoned from his work, yesterday morning, to see his child—he found it dying—another child was attacked, and he remained

with it, and long before night the child and the father were dead. One gentleman came up in town, after breakfast, for a physician to visit his wife, and at 4 o'clock the wife and the husband were dead. These incidents show the fearful power of the pestilence in its confined limits.

We earnestly implore the citizens of Louisville to join the city authorities in measures of self-preservation to-day. Let every survivor in the track of the pestilence be at once removed from the locality, and then let it be thoroughly purified. Let it be stayed without delay. All business should yield precedence to this work—trace the path of the flooding rains in the flat contiguous to the desolated street, and remove the inhabitants, and clean and purify every wet and filthy place. Cover the marshes with sand, and lay it on thick; and the marshy border of every pond should be treated in the same way. Let the work be well and thoroughly done, and make the sanitary condition of the lower end of the town equal to that of the upper end of town. In that district, wherever cholera showed that work was to be done, it was promptly done, and the pestilence ceased. The magnitude of the work requires great efforts, but let each man exert himself, like a man. If we all do our duty, Providence will do the rest. During the day, malaria has but little power; the night is the season of its strength. If we all exert ourselves to-day, the strength of the destroyer will be shorn before the night comes. Do not throw upon the city authorities more than they can do. They have done and are doing all that any reasonable being can ask, but there is much more to do to-day than the city officials could do if their force were quadrupled.

We have referred to the fact that the people west, north, and south of Market, between Tenth and Twelfth, are comparatively healthy; those east and south-east of the pond, near Eleventh, are the exclusive victims. With the exception of the spot named, the entire city was al-

most free of cholera yesterday. We know of no case out of that locality. While thankful for this exemption, should not the exempted portions show their gratitude by laboring to-day in the work of purification? Let sanitary laws be forced on those who will not attend to them. Those who are well now owe this to themselves. Eternal vigilance is the price of health."

Every prediction made in this appeal was verified to the letter. Numbers of citizens went to the scene of disaster on Tuesday, and remained through the day, assisting in sanitary measures and in the removal of the inhabitants. In addition to these citizens, the authorities had a large force at work from Monday afternoon until the next Saturday. The benevolent feelings of relatives and friends induced some persons to remain in the infected quarter at night, and the attacks were confined to these. Of the multitudes who labored in the very focus of the pestilence, in day time, not one was attacked, thus showing that the basis of the foregoing appeal, contained in the declaration: "during the day, malaria has but little power; the night is the season of its strength," was a true one. If malaria is not the cause of cholera I know nothing whatever of the cause, and could give neither advice nor an opinion of its operations. The reader can judge whether this lamentable condition belongs to my conviction of the malarious origin of cholera. But it must be manifest that the full verification of the predictions of 1833, 1849, and 1850 made on various points of cholera, is positive proof that the habitudes of the cause of cholera are well known, or these predictions would have signally failed. The nature, the character and the elements of the remote cause of any disease whatever, are the same all over the earth, and they have the same laws all over the earth. The nature, elements, and character of small-pox contagion are identical in Timbuctoo, Archangel, Cairo, and New Orleans, and the same is true of the cause of any

disease. The producing cause of chill and fever may be modified in its effects, by habits of life, and by various other means, but the mode of its formation is ever the same. And this is true of the cause of cholera—the elements of its formation, no matter where it may show itself, are ever the same, and those means that are successful in guarding against it in any one place, are equally successful in another. It would be a matter of public rejoicing, for it would be promotive of the public weal, if all medical men would inform themselves as well upon these subjects, as a part of the profession has done. All thoroughly informed medical men agree upon the use of preventive measures for guarding against cholera, and if all the profession were thoroughly acquainted with all the facts on the subject of cholera, and all the laws that govern its cause, there would be an incalculable gain to the world. And is not this the noblest mission of medicine? Is there anything in the science that more deserves the attention of members of the medical profession? A crop of weeds can be grown to order, if the seed are planted, but not with more certainty than the production of a cholera endemic, if its seed are fostered and nourished. A fire may easily be extinguished with water, but with no more certainty than cholera may be prevented by the proper means.

But what have we gained thus far in the facts already brought forward? Let us measure them. First, we have found that cholera can originate in a ship, just as any other disease can, and as ships have ever been notorious for originating disease within their own limits, there is ample reason for believing that the ships New York and Swanton originated the disease with which they were attacked in November, 1848. Neither the ships nor the passengers had been in the way of "catching" cholera, and this fact settles the non-contagious character of the malady. A disease that can be acquired without conta-

gion is always acquired without it. Then again we have the additional evidence of non-contagion in the facts that the steerage passengers in the ship New York did not communicate the disease to any one of the cabin passengers of the vessel, nor to any of the crew, and though the steerage passengers scattered themselves over the city of New York the disease was not communicated. There was no local cause for it in New York, therefore the disease did not spread, and it ceased even among the steerage passengers of the New York, after they left the ship, thus showing that the cause of the disease was local, and the locality was on the ship. Prof. Dickson, of Charleston, S. C., once undertook to build up the theory of contagion upon the events that happened at Folly Island, in connection with the brig Amelia. But the careful reader will be astonished to find that there was not a case of cholera, except among persons who had been at the wreck, on which the cause of the disease existed. Several of the victims escaped through the quarantine, and went into the city, but no one, who was not at the wreck, took the disease. And from such truths as these Professor Dickson drew the extraordinary conclusion, that cholera was contagious! But to return: Although the Philadelphia Board of Health gravely declare that the coincidence of the attacks of the two ships at sea is shrouded in obscurity, and then undertake to clear it up by an imaginary cholera atmosphere in the neighborhood of Nova-Scotia, when we come to examine the matter thoroughly, we find the Philadelphia Board in the condition of those gentlemen who undertook to solve the problem proposed by Charles II, respecting the identity of the weight of a tub of water with, or without a fish in it—instead of the cause of cholera on board of the Swanton being shrouded in obscurity, and instead of a bewildering mystery in the coincidences referred to, it turns out that there was no cholera on board of the Swanton, until after her arrival

at New Orleans. Her disease was dysentery. It would be much easier to prove that the Swanton caught cholera from New Orleans, than to show that the people of New Orleans caught it from her. There was cholera in New Orleans many days before the arrival of the Swanton; there was none on the ship until the day after she reached New Orleans. The facts, thus far then, indubitably show that cholera can originate locally.

Let us, however, fasten the point of the local origin of cholera more securely, for it is an exceedingly important matter. Year after year the idea that cholera first appeared in 1817 has been repeated in every imaginable form, and it is an error that has been prolific of no small amount of misery to the human family. Men write glibly about the travels of cholera from 1817 to the present time, and thus give rise to the idea that the cause of cholera is a traveller, instead of being of local origin. Abundance of proof shows that cholera dates much farther back than 1817, but I take the case of the ship Mangles, in 1815. Mr. Corbyn, an intelligent English surgeon, took passage in that ship, in 1815, for India, and at that time, stray waifs of cholera atmosphere lying out at sea watching for ships, had not been manufactured, for this was two years before Jessore started the disease upon the circumnavigation of the globe. Nevertheless, the ship Mangles, after being at sea two months, was visited with a terrible attack of cholera, and lost a number of her passengers and crew. Mr. Corbyn's testimony is indisputable, for he gave it in 1832, after a long intercourse with the cholera of India. Here then we find evidence of the local origin of cholera on this ship, in 1815. Again: Dr. Ayres, of Hull, England, whose intimacy with cholera in England, since 1832 is well known to the profession, *published in* 1818 *a description of a frightful endemic cholera that appeared in England, in* 1817, and he now declares that there was no difference between that endemic and the

cases called Indian or Asiatic cholera. That was not imported, most assuredly. Dr. Thackerah, of Leeds, England, was a physician in a severe visitation of cholera in that city, in 1825, seven years previous to the reputed importation into Sunderland. The endemic of 1825 was not imported—it was local in its origin.

The second important fact to be gathered from Drs. Fenton and Buel is on the temperature connected with cholera. In New York, Dr. Buel testifies that a sharp frost arrested the cholera of 1848, in the fourth case. In New Orleans, about the same time, the weather was oppressively warm, and cholera raged with devastating power during the hot weather, and was arrested by frost, early in January. Here then we find that the cause of cholera is connected with temperature—it is the production of warm weather, and its power is arrested by cold weather. If its effects are displayed in winter, they are always exceedingly limited, in comparison with the summer effects, *and they show themselves early in the winter only when the incubation commenced in warm weather.* Numerous instances of this kind are familiar to readers of American medical histories. There is not one feature of the winter appearance of cholera, that has not often been seen in chills and fever, bilious remittent fever, plague, yellow fever, and other diseases of the same origin. A familiar fact, which speaks forcibly on this point, occurred in the history of Bethlehem, Connecticut. It should be well understood by those who have to look into the varying phases of disease.

In 1750 a severe form of fever attacked the town of Bethlehem, in the spring, immediately after drawing a body of water off from a woodland pasture. Ten years after this event, after a similar flooding in summer, and a draining off of the water, a frightful epidemic fever appeared in Bethleehm, in November, and raged in cold weather. There is no fact more familiar to well read

medical men, than the appearance of diseases, in winter, whose cause belongs to hot weather, but a few examples may aid the purposes of this paper.

Dr. Davis, of Columbia, S. C., gives an account of a winter epidemic which commenced in that town in November, 1815, immediately after the common bilious fever. Dr. D. adds: "The most swampy situations, margins of rivers, and places most subject to the endemial autumnal bilious fevers, suffered most severely from the epidemic."

Dr. Withers, of Warrenton, Va., describes a winter epidemic in 1814 in Fauquier. He says: "The epidemic was most prevalent and fatal in *the marsh*, about Woodside's; the face of the country is low and very wet. There were some cases on Tinpot (run). These were the parts most severely affected by summer and autumnal disease."

In Winchester, Va., the autumnal epidemic of 1822 was followed by a winter epidemic. A snow storm in February covered the earth a foot deep. This, with cold north-east winds and rain in the last of that month and first of March, produced considerable sickness.

These are given merely as examples. They might be accumulated into immense masses, all proving that the winter epidemic is dependent upon the same cause as that which gives rise to the epidemics of hot weather. It is a very familiar fact to the profession that malarious diseases occasionally display great energy in cold weather, but no matter whether they show themselves in summer or winter, they exhibit themselves in malarious localities. The medical profession in this country never doubted the fact that an epidemic intermittent or remittent fever which prevailed in winter, originated from the same cause that produces summer and autumnal diseases, and why should the doubt arise respecting cholera? Since it is notorious that other forms of malarious disease often ap-

pear in winter, why should any one peril his reputation by saying that cholera is not malarious because it has occasionally been seen in winter? What public end is promoted by such puerilities? What public service is performed by such loose adventurers of false logic? The very fact that cholera has occasionally appeared in winter is a good reason for believing that it springs from malaria, because it conforms in that, to a well known and familiar feature of all the other diseases that arise from malaria.

Another prominent feature of malarious disease is found in the extraordinary length of the latent period, during which the remote cause may lie in the system without showing any of its effects. There is no other cause of endemic or epidemic disease, than malaria, which has this marked peculiarity. It is not unusual for persons from some of the New England States to acquire chills and fever during a visit to the West. They take medicine, disturb the disease by "breaking the chills,' as the process is called, and then they hurry off home to a region where such diseases are unknown. But in the course of a few months, three, six or nine months, the western acquisition reasserts possession, and the victim is seized with fever and ague again, in a region where such forms of disease never originate, and there are many such places in New England. This is an example of the latency of malaria. This latency is found in all malarious diseases. Oriental plague, yellow fever, bilious fever, dysentery, cholera morbus, &c. &c., are all diseases of hot weather, but occasional attacks of these diseases occur in winter, as may be easily determined by an examination of the works of Rush, Lind, Cleghorn, Russell, Cheyne and other observers. The reason of these peculiarities is that malaria may lie dormant in the system for weeks and months before it displays its effects. What

is true of the diseases mentioned above, is true of cholera.

I have frequently referred in former papers on this subject, to the remarkable features of what was called the Walcheren disease. The fate of the splendid army sent out by England, to the island of Walcheren is familiar to the most of medical readers. The most vivacious attack of the imperial guard could not have mowed down the men with greater devastation than the malaria of the island of Walcheren did. Regiments, that landed in full strength and health, were soon reduced to twenty or thirty men. The sickness was wide-spread in its devastations, and the fatality was very great. The discovery was made, that it was futile to fight against the climate, and the broken regiments were returned to England. The Walcheren disease was peculiar in its singular effects upon the liver and spleen, and was easily recognized by its peculiarities, and it is recorded by the eminent physicians who were with the army at Walcheren, and returned with the troops to England, that no matter in what part of England the soldiers were stationed, no matter how good the health of the men might be on their return to their native land, cases of the Walcheren disease continued to manifest themselves for nine and ten months after the troops reached England, and no such disease was known among the inhabitants, who had not been to Walcheren, of those sections of Great Britain where the troops were quartered. This shows that the activity of the cause is not always in proportion to the malignity of the malady, for a more malignant intermittent never was known. Yet the cause was acquired in the Island of Walcheren, and was dormant for nine months, and in some cases, for a longer period. Again: an English Regiment was sent to India, and stationed in a region that was subject to yellow fever; at the proper season, that disease seized the regiment, and made such havoc that

the healthy portion of the soldiers was transferred to a point where malarial disease was never known to originate. These troops went into garrison with a regiment that had been stationed for sometime at this healthy point, and among whom there was no sickness. Cases of yellow fever, however, continued to occur among the transferred soldiers, for four months, while there was not a case among the other soldiers occupying the same barracks. Here is a clear case of the latency sometimes exhibited by even as potent a cause of disease, as that which gives rise to yellow fever. And in strict accordance with these features of malarial disease, we find cases of cholera. In a district of Louisville, in which a fatal pestilence of cholera showed itself last summer, there were fifty cases and thirty deaths in the course of a few hours, on one side of a square, that was not by any means populous. There were persons who slept in the midst of this mortality on the night it commenced, and who fled from their lodgings the next day. Some of them went to the country, and remained in good health for one or two weeks, and were then fatally attacked with cholera, when there were no other cases within five miles of them. A notorious example in the winter of 1848, has been often quoted by the author of these remarks. I allude to the cases of Major Dix, of the United States Army, and two of his fellow travellers. Major Dix was at Memphis, where there was a number of sporadic cases of cholera, and after remaining at that city for sometime, he came to Louisville, which was free from anything resembling cholera. Major Dix remained in Louisville about a week, and passed on to Wheeling, apparently in perfect health. Between Wheeling and Brownsville he was seized with cholera, while in the mail stage, and died in a few hours. In the same stage, were two other passengers who had been at New Orleans a few weeks before, while the pestilence was carrying off its hundreds. One of these

passengers reached Brownsville, where he was attacked with cholera and died in a few hours. The other reached Youngstown, and died with cholera. Although the stage was filled with passengers, the only persons affected with cholera were the three gentlemen who had been in a cholera atmosphere in the South, some weeks before. There was no such atmosphere where they died, because its existence can be known only by its effects, and there had been no other cases of the disease for months, in all that region of country, nor were there any others for months afterwards. These cases, then, show very conclusively that the cause of cholera can lie dormant in the human system for a considerable space of time. There are familiar examples where the hot weather, suitable for the formation of the cause of cholera, was speedily followed by cold weather, and cases of the disease were thus *developed* in a state of things that could not have *originated* cholera. If cholera is indifferent as to its seasons, why is it that ninety-nine in a hundred of its visitations occur in hot weather? and why is it, that all over the earth, where its limited attacks have been seen in winter, men have recorded that its range was entirly confined to those portions of cities that were notorious for malarial disease. This is recorded of Edinburgh, London, Paris, Moscow, Petersburgh, and of all other places.

Medical men do not regard the winter attacks of chills and fever, bilious fever, yellow fever, oriental plague, etc., as evidence against the malarial origin of those diseases. They know the winter visitations are as much due to malaria, as the summer devastations are, and why should cholera be the exception?

Another marked feature of malarious disease is that attacks of it occur more frequently in the night, than during the day. This is especially true of the violent forms of malarious disease. I have seen a great many visitations of cholera, and have closely observed endemics

of it in the years 1832, 1833, 1849, and 1850, and in all, the marked predominance of night attacks was conspicuous. And the universal records of medicine show that this feature has been common to cholera, all over the world.

Malaria attacks persons in the lower stories of houses with more violence than in the upper rooms, except where the upper tenements are as filthy as rooms could be anywhere, as in Edinburgh, Glasgow, etc. I have seen this law of malaria in constant operation in all the cholera visitations I have ever seen, and it is a fixed fact that those who lodge in rooms elevated two and three stories from the ground are almost entirely exempt from cholera, while it is raging among those who lodge near the ground. Hosts of medical men have testified to the truth of the operation of this law in cholera, in all regions of the earth. And in further corroboration of the malarious features of cholera, take the testimony of Professor John Bell, who does not believe that there is such a thing as malaria. Yet his examination of the history of cholera induced him to bear the following decisive testimony:

"The chief home and seat of cholera is in low, damp situations—on the banks of rivers or near pools and ponds of water—or which are encumbered with vegetable remains or filth of any kind. Those parts of cities thus situated and circumstanced, have always suffered most, and sometimes have been the exclusive seats of the disease, in all the chief cities of Hindostan, Calcutta, Madras, Bombay, Seringapatam, etc.; of Russia, as in Moscow, St. Petersburgh, Astrachan; of Germany, as in Vienna, Breslau, Berlin, Hamburg; of France, as in Paris, and other places; of Great Britain and Ireland, as in London, Sunderland, Newcastle, Gateshead, Musselburgh, Dublin, Cork, etc.; this fact has been placed beyond a doubt."

I here republish my remarks made in the article from which I have already quoted freely.

But an objector urges that if malaria is the cause of cholera, we should have that disease every year. The objection does not amount to anything like reasoning. There are a great many of the well ascertained features of malaria, which we cannot account for; we do not know why quotidian fever prevails in one country, tertian in another, quartan in a third, and why remittent fever is the prevailing form in another. We know the fact that these varieties originate, prevail, and decline under a community of circumstances, that show a common cause for their production. If we find intermittent fever prevailing for a while, then a severe remittent type for a brief space, followed by a continued form, and as the latter declines, the remittent re-appears, and gives way to the intermittent form, we do not assume that new causes come into play. It is reasonable to say, that the same cause varies the degree of its power. It is remarkable, that this identical state of things is true of intermittent fever and cholera. It has often been recorded, that a severe form of intermittent fever began to prevail at some particular point, in the midst of which cholera appeared, and the intermittent disappeared, and as cholera declined, the intermittent re-appeared. This has been so often noticed, not only with intermittent fever, but with other forms of malarial disease, that we are on safe ground in saying that the same cause, varying in degree, produced the intermittent, or other malarial disease, and cholera. And as cholera is universally found under precisely such circumstances as we find other malarial diseases, obeying the identical laws that are universally recognised as belonging to that class of maladies, yielding in no instance to any other laws, it would be folly to look for any other cause for cholera, than that which is under the dominion of malarial law. To make the matter plain, let us take a single example. Medical men have often remarked, in describing cholera, that intermittent fever was prevailing

in a special locality, when cholera appeared; they have recorded that the intermittent become more intense upon the approach of cholera. What does this mean, if it does not plainly say that the intermittents became more severe as the cause that produced them became stronger? In the midst of the operations of the cause producing severe intermittents, cholera appeared. Were there two separate causes of the diseases in the atmosphere at once? Where is the necessity for believing such an absurdity as is involved in that idea? But what is a grave intermittent? It consists of an intense cold stage unusually prolonged; re-action comes on slowly and feebly, and the sweating stage is generally absent. The most intense intermittents have no re-action, and in them there is the most perfect identity of symptoms with those of cholera. No man could tell one disease from the other. Senac, an accomplished physician of the times of Louis XV., describes a malignant intermittent in such terms that his description of it could be applied to cholera without making any alteration. No physician can read Senac's graphic account of the symptoms of malignant intermittent without being forcibly struck with the similarity of the symptoms to those of cholera. We know of no other cause than malaria that can produce those symptoms uniformly, nor can any one name another. Why seek for another when we have one equal to the production of all the effects, especially when we know the laws that rule that cause? If then, malaria can produce such identical symptoms in malignant intermittent as are found in cholera, why seek two causes for the same effects? That which is capable of producing ten cases of malignant chill, can produce ten thousand, if it is extended in its influence.

The principles of the Newtonian philosophy are universally regarded as the basis of truth, and when they are rigidly applied to medical subjects, there will be more

exactness in their principles. The first law of Newton's philosophy, is: "We are to admit no more causes of natural things than such as are both true and sufficient to explain their appearances." Rule second—"To the same natural effects we must, as far as possible, assign the same causes." Rule fourth—"In experimental philosophy, we are to look upon propositions collected by general induction from phenomena as accurately, or very nearly true, notwithstanding any contrary hypothesis that may be imagined, till such time as other phenomena occur, by which they may either be made more accurate, or liable to exceptions." These are the laws upon which all modern philosophy stands, and upon their secure basis, we confidently trust the malarial origin of cholera.

But why does not cholera appear more frequently? We might as well be asked why intermittent, remittent, and bilious fever, dysentery, cholera morbus, etc., do not come, without the conditions necessary to produce them; but as many regard the question propounded above, as a very reasonable one, we shall proceed to answer it. The varying phases of malarious disease are as dependent on the varying conditions of seasons, as the productions of the soil are. Those climates that are very uniform in their harvests, are uniform in the character of their diseases, and no violent departure from their customary health can take place without a noticeable change in their meteorology. Thus we find the epidemics of the middle ages ushered in by tornadoes and floods of rain; they expended their energies first upon the crowded, filthy, and wretched quarters of the poor, aud became general in a city where the general atmosphere was contaminated by a persistence of the conditions that had originated the cause in the suburbs, the filthy lanes, closes, etc. This has been the record of cholera, too, all over the earth. An attentive examination of the facts of physical geography gives clear and satisfactory reasons for all those phenomena in cholera

that have been looked upon as remarkably mysterious. Those who have derived their notions of physical geography from Mercator's projection, have been surprised with what they call the erratic course of cholera; its departure from straight or direct lines, its appearance at a particular locality, after having already shown itself at a point far beyond it. All these things are in strict accordance with the isothermal lines of Humboldt, and any one familiar with these lines, and with the doctrines of malaria, would have looked for those very features, that so long bewildered mankind. There is quite as much mystery in the departure of vegetation from a straight line, in the northern zones, as there is in the wanderings of cholera. If, for example, we expect vegetation to follow the parallel lines of a map, under the idea that the distribution of heat is in parallel lines, we find a mystery at once in Lapland. The angular projection of the part of that country which produces barley and other food, for human beings, is a matter of surprise until it is found that the isothermal line makes a similar angle. There is a fact of great importance that should be kept in view; in torrid zones the isothermal lines are very regular, and diseases of seasons are equally so, (cholera swept over 10,000 miles there sooner than it did hundreds in the temperate zones;) where those lines are erratic, diseases, that are dependent upon climate, are also erratic. The law, as expressed by physical geography, on the subject of plants, is true of malarial diseases. That law is: "lines of equal heat do not follow the parallel of the equator, but have convex and concave summits, which are distributed very regularly over the globe, forming different systems along the eastern and western sides of the old and new world, in the centres of continents, and in the vicinity of the ocean. Temperature determines the habitation of races, and consequently, the extension of the vegetable kingdom, the forms of plants, in general

presenting the same relations under the same isotherms; and as these lines form curves at unequal distances from the equator at different points in their course, so the vegetable zones, determined by the degree of their temperature, follow the same inflections." This law applies as perfectly to malarial disease as to plants. The operation of extreme temperatures modifies the growth of plants, and the production of malarial disease. It is impossible to fix with certainty anything that varies so much as temperature does. What Physical Geography calls isothermal lines, isocheimal and isotheral curves are only an approximation to a general result. A particular locality may have for a series of years almost a uniform annual mean temperature; a departure may take place from this uniformity, and excessive heat and a great deal of rain may present themselves. Just as certainly as this departure takes place, there will be a corresponding change from the health of that locality; and in this way, a place that may have acquired a great reputation for health, may be made the seat of a dreadful pestilence; a striking illustration of which shall be given directly. Another law of Physical Geography must be understood in order to understand the philosophy of malarial endemics. The annual mean temperature of the earth is about the same, year after year. It follows then that if any particular locality has an unusual amount of summer heat, in any particular season, some neighboring point must have a corresponding diminution; and if other circumstances be favorable, the point that has the usual amount of heat, will have an unusual amount of sickness, while the place that has the diminution is healthy, even if coterminous with the seat of pestilence. We find many striking illustrations of these facts, but there is one here at home, that is so perfectly to the point, that we prefer its use, although we have frequently referred to it, in other publications. In Lexington, Ky., in 1833, there was an unusual amount

of summer heat, attended with an extraordinary quantity of rain. Portions of the town are remarkably well drained, while other parts are not in a condition to be drained, when rains are excessive. In a portion of the flat part of Lexington there was a deposit of the scrapings of the streets, and of the filth of the city for many years, and upon this mass of dead vegetable matter, the unusual heat, and the floods of the spring poured down their power. Here then were all the elements for a malarial pestilence, and it assumed the form of cholera. The disease commenced at the filthy spot we have mentioned; it raged with peculiar fury in all that part of the city that was under the influence of the locality we have named, and ravaged other parts in a ratio corresponding to their approach to similarity of condition. Large portions of the city were exempt from the pestilence. We visited Lexington some weeks after the cessation of cholera, and with the assistance of a gentleman perfectly familiar with the history of the pestilence, we made a map of the place, on which was indicated all the high and flat parts of the town, and the number of deaths in each house. In analyzing that map, we were amazed at the tenacity with which cholera clung to the flat and undrained localities, for where the cause of the pestilenre exhibited the remarkable power it did in Lexington, one might have reasonably supposed that the deleterious atmosphere would have travelled more frequently than it did, beyond the exact source of its production.

During the rage of the pestilence at Lexington, Versailles, only twelve miles distant, enjoyed good health. Instead of an unusual summer heat at that place, there was a diminution; and there was nothing like an excessive season of rainy weather. But in 1835 these conditions were reversed. Lexington and Versailles both had a good deal of rain, so much indeed that the people of Lexington dreaded another visitation of pestilence, and the crops of

Woodford county, of which Versailles is the county-seat, were much injured by the rain. But, though the rain was abundant in both places, there was a remarkable difference in temperature. While the heat was severe in Versailles, the people of Lexington were obliged to have fires in their houses in the evening to keep themselves comfortable. That was the year of pestilence in Versailles, and Lexington escaped. These are potent examples of the truths we have been endeavoring to inculcate. These are forcible truths upon a momentous subject, but I am anxious to make the subject as clear and convincing as possible. Look to the facts now in Louisville.

In this city, in the years 1832, '33, and '49, cholera commenced each year in the same square, and within a few yards of the same spot. In 1849, this spot was cleansed, and thorough work was made of the cleansing. The result was, that in 1850, the worst cholera year that Louisville has known, there was not a case in that ancient haunt of the malady. In 1833, a number of localities was visited by cholera; in 1850, some of these places had undergone great changes; they were thoroughly drained and improved with good dwellings. In these improved spots there was not a case of cholera in 1850. But in those spots that continued in 1850, in the condition they were in in 1833, cholera was severe. What stronger proof could we have of the local origin of the disease, even if those facts stood alone? Again: In 1850 a green pool of water stood in a vacant lot fronting on Jackson street, in Louisville, and run behind some four of five houses on the south side of Jefferson street. There was not a house on either side of Jefferson street, extending as far as the length of the pool already mentioned, that was not attacked by cholera in one night. Those who lived south of the pool, much nigher to it than the victims on Jefferson street, escaped an attack. The south wind blew the malaria from them upon the people on Jefferson street, and the range of the cholera on Jefferson was precisely

the width of the length of the pool of marshy water. Those who lived above or below the length of the pool escaped, though living otherwise in as favorable a condition for cholera as those who were attacked by it.

On Market street, between Eleventh and Twelfth streets, opposite the lower market house, a number of people lived in a flat, undrained locality. Pools of water stood under some of the houses; the cellars had been full of water repeatedly, and some of the lots and houses were very filthy. A short distance from this square stood an old pond, in the edge of which large quantities of hemp-shives had been thrown, and the evaporation of the water had brought a considerable mass of this putrid matter to the surface. The evening wind blew across the pond, and carried malaria to those who had an abundance of it in their dwellings. A frightful cholera commenced in the night, and by 10 o'clock of the next night, in that sparsely populated street, there were fifty cases of cholera, of which thirty died in a short time. There were about one hundred deaths in all. The disease reached as high as the third house above Tenth street, and was restricted to the locality where it originated. As soon as the endemic showed itself, active measures were resorted to, for the removal of the cause; the people were removed, the edges of the pond covered with lime and sand, and the dwellings purified with lime. In this way the disease was restrained within the limits of its outbreak, and did not extend beyond the points of its first development. And there is a fact that should be noted, both as evidence of the malarious origin of the disease, and as a source of confidence to others hereafter. On the night of the commencement of the disease in the square we have described, the writer of this essay, fearing the evils of consternation when the people should hear next morning of the night's dreadful work, drew up an appeal urging the public to go to the assistance of the afflicted. The

people were assured that no one would run any risk in day-time, but those who remained at night would suffer. In response to this appeal, great numbers went down, and worked hard for a number of days. Of these not one suffered. But several of those who nursed at night took the disease and died, the two sets thus vindicating the truth of the prediction in the published appeal I have quoted. Malaria is almost innoxious in day-time, but is fatal at night; it, therefore, was the cause of the fearful pestilence that raged in the infected section of Market street.

Of the people removed to healthy parts of the city, many escaped an attack of the disease, but a number were assailed by it in various parts of the city, and some in the country. They died among the friends who had sheltered them, but those friends escaped in every instance.

These facts clearly establish the local origin of cholera. But for the local circumstances which we have shown are present all over the world wherever cholera has manifested itself, there was no reason why the localities we have described in Louisville should have had cholera in preference to other squares. And in full corroboration of the local origin of cholera, the London Gazette for August, 1850, makes the following remarks:—

"*The tendency of Cholera to revisit the same houses and streets.*—As was anticipated and predicted, cholera, during its recent visitation, returned to the same countries, and the same cities and towns, and even the same streets, houses, and rooms which it ravaged in 1832. It is true that many places have been attacked in the recent which escaped in the former epidemic; but very few indeed that suffered then have escaped now. In some instances, it has reappeared on the very spot in which it broke out sixteen years ago. The first case that occurred in the town of Leith in 1848, took place in the same house, and within a few feet of the very spot whence the epidemic of

1832 commenced its course. On its reappearance in the town of Pollokshaws, it snatched its first victim from the same room and the very bed in which it broke out in 1832. Its first apppearance in Bermondsey was close to the same ditch in which the earliest fatal cases occurred in 1832. This return to its former haunts has been observed in several other places, and the experience abroad has been similar. At Groningen, in Holland, the disease in 1832 attacked in the better part of the city only two houses, and the epidemic broke out in these two identical houses in the visitation of 1848."

Cholera is, therefore, no traveller; it is a denizen of the place, wherever it appears, and is indigenous to the soil. If it does not come every year, the reason may be found in the phenomena of failure of crops. There is no more reasonableness in supposing that cholera should come every year, if we look upon it as a malarious disease, than there would be in looking for a good fruit year annually, or a successful yield of the harvest every season. What seem to be very trivial changes in seasons, have a marked effect upon crops, and they also effect the public health. One state of natural phenomena produces intermittent fever; a different condition does not produce it, and the same is true of the great disease of the times—cholera.

It may be doubted whether in full view of all the circumstances connected with cholera, the pestilence has been a great evil to the world. If it has slain its thousands, it has taught and impressed truths that will be the salvation of myriads in the future progress of years. Governments and people have been taught the value of cleanliness, of ventilation, of pure air, and the imminent and certain danger of overcrowding. These things should have been known and valued at all times, but cholera seems to have roused the knowledge into great activity. When diseases are curable, people lean upon the doctor;

but when, as in cholera, there seems to be no cure in the generality of cases, the minds of men must be turned to the means of prevention.

In 1834, in a prize essay on Quarantines and Sanitary Regulations, written by Professor Caldwell, far in advance then of what sound and correct views of the habitudes of cholera have done within the past few years, that eloquent and able teacher of the laws of malaria, uttered the following prediction: "Cholera, though a fatal scourge to the world, will through the wise and beneficent dispensation under which we live, be productive of consequences favorable alike to science and humanity. Besides being instrumental in throwing much light on the practice of physic, it will prove highly influential in extinguishing the belief in pestilential contagion, and bringing into disrepute the quarantine and sanitary establishments, that have hitherto existed." How remarkably all this has been verified, is well known to the medical reader.

I think that the truths presented in this paper are ample for the proof that the cause of cholera is subject to those laws that belong alone to malaria. There is not a law of malaria that cholera does not implicitly obey, and the measures of sanitary regulation that control malaria have universally controlled cholera effectually. The recent records of English medicine are full to overflowing, on this important point, and fully substantiate it. And in view of these truths, we cannot but look upon all attemps to call public attention away from truth piled upon truth, to the miserable chimeras and fancies of ignorance, as deleterious in whatever degree these last mentioned influence the public mind. I must pay a passing tribute to a recent example of this kind.

In the February number of the Western Lancet, a Mr. Lea, a geologist, has undertaken to enlighten the medical profession upon the cause of cholera, and in his plastic hands, the problem is resolvable into geological formations

and solutions. Mr. Lea belongs to the Wernerian or aqueous school, and is amazingly generous to leave the feuds of his own science, to mingle in those of which he knows nothing. What has geological study taught him on the etiology of disease? What acquaintance with the operations of the remote, predisposing, proximate, and exciting causes of disease has he obtained from the study of Trilobites, Ammonites, Pterodactyls, Plesiosaurian and Iguanodon reptiles? With a wonderful ignorance of medical literature, Mr. Lea complacently announces: "the progress of investigation and experience, (fortunately for the interest of humanity) leads to the confirmation of all that has been published, respecting the truth of the so called geological theory of cholera. All other theories in this connection, have had an ephemeral existence, and fade away before the lights of science and experience." In a spirit of charity I must ascribe Mr. Lea's statements to superlative ignorance, for on any other plea, his language would exhibit a spirit of untruth that would approach the atrocious. The geological theory never has obtained any credence among medical men, and has scarcely had any serious consideration. Take an example of the ridiculous absurdity of the geological notions. M. Tardieu says: "M. Boubée communicated to the Academy of Sciences his extensive researches upon the progress of cholera, compared with the geological composition of the places marked by its passage. It resulted from this study that the ancient formations were spared, while the tertian and alluvial strata suffered most. M. Boubée concluded that in France the points at which one would most certaily escape the scourge, ought to be the greater portion of Bretagne, Limousin, Auvergne, Cevennes and the Pyrenees. But to show how little credit should be attached to such assertions, it is sufficient to add, that among the places designated by geology as the most fatal, we find Lyons, Guyenne, and Gascogny, which

in fact were wholly spared." And M. Littré and M. Monneret say: "all that has been written to prove that the cholera is more prone to attack those soils which are identical in geological constitution is in manifest opposition to numerous contradictory facts." And now this miserable Harlequin, thus scouted and scourged by science, has the impudence to blow its penny whistle and not only to command the world to listen to its syren notes, but to swear there is no other music in the universe!

As to the ephemeral medical theories of which the geological Mr. Lea speaks, we beg leave to refer to his careful perusal, the great work recently published by Dr. C. P. Riecke, a distinguished Prussian physician. The author makes a minute survey of cholera, and incontestably establishes the following truths. Dr. Riecke says: "Cholera is a malarious disease—a sort of malarious neuralgia, which acts through the vitiated state of the humors brought on by miasmata. Cholera is to be classed in the same category with ague, typhus, the plague and yellow fever. The effects of effluvia are as conspicuous with cholera, as with the yellow fever and the plague." The London Lancet speaks in warm terms of commendation of Dr. Riecke's valuable work, and the January No. of the British and Foreign Medico-Chirurgical Review thus speaks of it: "the work of Dr. Riecke contains much important matter as to the localization of the disease in Berlin; it is altogether a very valuable contribution to sanitary science." And this work is devoted to the malarious origin of cholera, one of Mr. Lea's ephemera. And the labors of such men as Drs. Guy, Grainger, Frost, Rogers, Sutherland, Lewis, Thorn, Baly, Gavin, Bushnan, all the Sanitary Boards of England, composed of men who understand sanitary science, and who base all their regulations upon means that cause the prevention of malaria, are to go for nothing, in the presence of Mr. Lea's farthing light! He drives at such men with as much

nonchalance as he would chip an intrusive piece of carbonate of lime from a Pentacrinus Briareus. While Great Britain is in possession of such laborers as those who are adorning her sanitary science with substantial honors, we do not think it marvellous that the English Government did not vote Mr. Lea a gold medal for the suggestion he made to the British empire, by letter, to prevent the appearance of cholera by the use of rain water!

Mr. Lea very confidently announces the following statement: "it will be found that all those extensive regions of primary and arenaceous formations, where no calcareo-magnesian water is used, have again escaped the much dreaded epidemic, as they did heretofore; and that no *well attested fatal* case occurred among those who used *rain water exclusively;* and I may add *boiled* water, though it is of less purity than rain water, and therefore not so entirely to be relied on when taken alone."

Now it is notorious to medical readers that the only known place which has been afflicted with cholera every year since 1818, is precisely that kind of a spot, or formation, which in Mr. Lea's geological judgment is a certain safeguard against cholera. About 260 miles N. W. of Madras, "a rounded mass of rock towers up abruptly from the plain. *This is not one of those limestone rocks common in some parts of India, which are formed by the evaporation of water deeply charged with calcareous salts. The rock is granite;* about half a mile in diameter, and some 500 feet high." Yet, on this granite or primary formation, where no calcareo-magnesian water is used, cholera annually asserts a sway which it has not exercised in any calcareo-magnesian deposit on the earth. The British and Foreign Medico-Chirurgical Review says: "the place of burial of each successive regiment bears sad testimony to its (cholera's) permanent and unrelaxed activity." Here then is a granitic rock, 500 feet above the plain, with no calcarao-magnesian water in the neighborhood,

with every geological requirement for salubrity, proven by the annual records of thirty years, the most permanent and fatal spot in the world for cholera visitations. If it is possible by any means to let out all the inflated consequence of any absurdity, how could voluminous tomes more effectually destroy anything, than this fact destroys Mr. Lea's geological phantasy. Mr. McGregor and Mr. Ferrier, medical officers at Bellary, indicate sources of malaria, but the calcareo-magnesian solutions, essential to Mr. Lea's rickety crotchet, cannot be found within many miles of the Bazaar of Bellary. And it must be remembered by Mr. Lea, while inflating his geological puff-ball with the statement that, "all those extensive regions of primary and arenaceous formations, where no calcareo-magnesian water is used have again escaped," that there are also extensive regions where no primary rocks are found, where the most modern groups are to be found, and in the most perfect regions of the Poikilitic system, where calcareo-magnesian water is exclusively used, in which there has never yet been a case of cholera. There is no difference between the "formation" and the drinking water of those portions of Louisville where cholera prevailed, and those extensive portions of the city in which there has never been a case yet. Cholera commenced in Louisville in 1832, 1833, and 1849 in the same spot; in 1850 this place was thoroughly cleansed, and in that year, when there was an unprecedented amount of cholera in Louisville, there was not a case in its former haunt. Parts of the city that had cholera in 1832, and 1833, and which remained unimproved, had it in 1850, while portions in which the cholera was severe in 1832 and 1833, which have been drained, cleansed, and improved with good buildings, had no cholera in 1850, though some of the other portions referred to were contiguous to them. But the geological formation, and the drinking water, in all these various aspects of the pestilence remained unchanged.

Mr. Lea may peck away at these facts with his geological hammer as much as he pleases, but he cannot recover his theory from its submerged condition.

It is needless to waste much time on such a notion as Mr. Lea advocates in the Western Lancet, and its appearance in that periodical is my only apology for even noticing it. There is the less reason for much notice, from the fact that Mr. Lea seems to be perfectly indifferent as to whether what he says is true or not. For instance, Mr. Lea asserts: "the plantations on the Mississippi, *now* supplied with rain water, and the towns and villages supplied with the same, *all escaped.*" Mr. Lea lays stress upon the word *now*, as though the introduction of the use of rain water, as a drink, in Mississippi were quite a recent custom, but there is no approach to truth in this, or any other part of his statement. Cholera prevailed in Mississippi plantations, where rain water alone was used, just as it did on those where it was not used; and those who used river water fared quite as badly as those who used calcareo-magnesian water. If Mr. Lea had investigated the subject with an eye to truth, or for any other purpose than that of nourishing his miserable little bantling, he could have found on the plantations of Col. Player, Mr. Maher, Mr. Morancey, at Millengen's Bend, and all through the plantations on Walnut Bayou, how little the use of rain water has to do with the prevention of cholera. The cholera was as virulent, as extensive, and as fatal on plantations where the purest rain water only was used, as where well water was the sole article for drink and culinary purposes.

But to mark, beyond all possibility of mistake the character of Mr. Lea's offspring, take two examples. Ledbury, in Herefordshire, England, stands on the blue limestone, with the anticlinal axis, just as Cincinnati does. The town stands on the summit of the rock, and of course is dependent on water that percolates through the limestone

strata. This water is exceedingly "hard," being more saturated with calcareo-magnesian salts than the well water at Cincinnati. *There never has been a case of cholera in that town*, but according to Mr. Lea it should be there day and night.

Take another. The village of Fochebar, Rosshire, Scotland, stands upon the old red stone, which Hugh Miller has made famous. The sand stone rests on gneiss, at the back part of the village the gneiss crops out. This is primitive rock, and there is no limestone, nor magnesian formations within fifty miles of the place. The water is as "soft" as the purest snow water. Here then there should have been no cholera, according to Mr. Lea, yet stubborn history says that one visitation of that disease swept away every human being, except one old woman. And numerous villages in Scotland, on the same geological "formation" were dreadfully afflicted by cholera.

How pitiable it is for a man, ignorant as he can be of a grave and important public question, involving the lives and happiness of the whole human race, to attempt to draw away the minds of people from the true sources of disease, and to fix them upon one that has no kind of connection with the cause, and which rests on no better foundation than the whimsies of a distempered imagination! All the wealth of California could not induce me to utter a statement on the cause of pestilence, that I do not *know* to be true, and fully entitled to public confidence. I know the responsible duties of public hygiene, and when I cease to be true to them, let my name be execrated.

But to sum up all in a few words: the geological conjecture does not and cannot account for the fact that cholera prevails in hot weather, and is checked or controlled by cold; it cannot explain why it hangs upon the borders of rivers, near marshes, in damp and filthy localities; why it follows the direction of a wind, and destroys seven hundred persons in one quarter of a town, as Augusta,

Ga., while there is not a case in all the rest of the city; why it attacks one side of the street very fatally where there is not a case on the opposite side; why it is fatal among sleepers in the lower stories, and not in the upper stories; and why it does not prevail every day in the year. There is not one feature of cholera explained by the geological theory, and it is unworthy of any attention, especially when it is completely ignored by the only profession capable of passing a judgment on its demerits.

Upon one more statement of Mr. Lea, I must be permitted to make a remark. He says: "last summer, when the cholera broke out in Louisville, it was reported to be caused by the water of a well being poisoned." A more senseless report never was started. Medical men know that many persons may be exposed to malaria, and that a number will escape its influence; toxicologists know that if a poisonous water, capable of destroying life, be taken into the stomachs of one hundred persons, every one will show the effects. Numbers of persons in the houses in which there was the greatest fatality, who used water from the same pump used by those who died, were not even sick. The pump handle was removed, but abstinence from the water did not stop the disease. Persons who left the district, and went to parts of the city in which there was no cholera, succumbed to the disease a week after having quit the use of the fatal water! They remained perfectly well up to the onset of cholera. This was the case with a number of persons; in the localities in which they died, there had been no cholera, nor has there been since. In addition to these conclusive facts, there were families among the first victims who did not use the water of the suspected pump. But Mr. Lea's pump story is quite as rational and useful as the rest of his whimsical notions.

Dr. Starr, of Cincinnati, has recently published a paper, entitled, "Reasons for concluding that an excess of

carbonic acid is the atmospheric cause of cholera." This is a very respectable paper, and the statements are fairly presented. But there are fatal objections to the theory. For instance: a concentrated carbonic acid gas, capable of producing the overwhelming effects that are often seen in cholera, as for instance on the 24th of July, in Louisville, would not produce the symptoms of cholera. Cholera does not commence with "a sensation of great weight in the head, giddiness, a sense of constriction in the temporal regions, a ringing in the ears, with a pungent sensation in the nose, a strong tendency to sleep, accompanied by vertigo, and so great a loss of muscular power that, if the individual be at the time in an erect posture, he instantly falls, as if struck to the ground." These are symptoms of the poison of carbonic acid gas, when it is sufficiently concentrated to destroy life, but these are not in any degree the symptoms of cholera. A man cannot imbibe a fatal dose of carbonic acid gas, and carry it two or three weeks before any effect of the dose is seen. Dr. Starr should have suspected his views, when he had to imagine that "there was," in the track of the packet New York, in the latitude of Nova Scotia, "an ocean bed of carbonate of lime, yielding its carbonic acid under the chemical influences exerted by the decomposing agents of the ocean." This is drawing the matter rather strong for philosophical medicine. There is not one oceanic fact to justify the notion. One of the laws of carbonic acid gas is that it is rapidly absorbed by water, and it cannot be let loose at the bottom of the ocean, and sent up from the depths of the sea into an emigrant ship.

Dr. Starr should have remembered too, while accounting for cholera, in Russia, in winter, that according to his views cholera should be a winter disease more commonly than it is. I am aware of the fact that he states there is less carbonic acid made in winter, on account of the arrest of decomposition by a low temperature. But this

does not meet the difficulty, as Dr. Starr himself finds, when he undertakes to account for winter cholera, in Moscow. He there finds that abundance of the gas is manufactured in hot, close, unventilated subterranean rooms. And from what is known of the desolating effects of cholera, from overcrowding human beings in small apartments, in summer, when ventilation is used to some extent, what should be the case in winter when houses are made as tight as possible to keep out cold weather; when fires consume the oxygen of the room, and carbonic acid gas is extensively made by the lungs, even in a low temperature? Cholera should constantly appear in winter, under these circumstances, and overcrowding should be more fatal in winter, than in summer. But truth gives a different result.

I hope that Dr. Starr will pursue his investigations. He has moved so far on the road to truth, that I am persuaded the use of facts, logic, rigid induction and analysis will lead him in the paths of safety.

I am wedded to the malarial origin of cholera, not for the sake of the theory, but because it is the only view that explains all the phenomena. *There is not one law of malaria that is not found in the habitudes of cholera, nor is there a feature of cholera that is not confined within the circle of the powers of malaria.* There is not one useful sanitary regulation in use in any part of the world, that is not in strict conformity to the doctrine of malaria, and this is a testimony to its truth, the more valuable from the fact, that the sanitary laws are often used by those who repudiate the malarious origin of the disease. It shows that there are others besides Moliere's Bourgeoise *gentilhomme*, who may talk prose without knowing it.

I regret that my space is exhausted for the present. Much the most interesting part of my undertaking remains to be done; and that is the drawing up of a record of the triumphs of medical hygiene, over the great pes-

tilence of the times. This must be deferred, however, until another month, and I hope in my next to show how earnestly, zealously and effectually, the medical profession have labored in the service of humanity. In no one thing has medical philosophy more completely entitled itself to the gratitude of mankind than in its victories over the cause of cholera, and those triumphs I shall endeavor to record hereafter.

ART. II.—*Six cases of Phthisis Pulmonalis treated by Cod-Liver Oil.* By DAVID W. YANDELL, M. D., of Lonisville, Ky. Formerly attending Physician for the Faculty, at the Louisville Marine Hospital: One of the physicians to that Institution, etc.

CASE I.—Was a married lady, aged 28 years, of imperfectly developed form and delicate habit, with freckled skin, red hair, and high nervo-lymphatic temperament, who inherited from her mother a deep tuberculous taint.

Her general health had never been very good. She had never borne children.

The patient does not remember ever to have been without a cough during the colder seasons of the year. It was sometimes violent and paroxysmal, but generally, short, frequent and hacking in its character. She has had two attacks of acute pleurisy, both affecting the left side, and, according to the testimony of her physicians, confined to the central and upper portions of the left lung, and of very limited extent. Towards the close of the spring of 1849, the patient had a slight hemoptysis, which was almost immediately followed by acute inflammation of the summit of the left lung, implicating both the pleura and pulmonary parenchyma. Her medical attendant pursued the treatment usual in such cases, which, however, produced no satisfactory change in the symp-

toms, and at the expiration of six weeks he was dismissed. During this time, it may not be unworthy of remark, the hemoptysis recurred on several occasions, once or twice to a considerable extent. I was called to the patient on the first of July, when her condition was briefly as follows: She was the subject of hectic and night sweats. Her respiration was hurried and painful; cough frequent and short; expectoration muco-purulent; pulse quick and irritable; bowels costive, appetite poor, thirst considerable. She complained of excessive pain of a lancinating character at the summit of the left lung, which frequently extended from this point over the whole of that side. It was increased by cough and full inspiration. The patient had emaciated very rapidly, and was exceedingly feeble—too much so to leave her room, and generally, to quit her bed.

Exploration of the Chest.—The chest was narrow and flattened antero-posteriorly, and dilated very imperfectly. *Right side*—reasonance normal; puerile respiration at the summit. *Left side.* Dulness in clavicular region and in corresponding portion of lung posteriorly. Respiratory murmur feeble over the same regions, mingled with a mucous ronchus, composed of fine and frequent bubbles; bronchial respiration and slight broncophony, more perceptible, perhaps, behind than in front, and a grazing friction sound.

In view of the local complication—pleurisy—I ordered a blister to be applied over its seat, to be dressed with a cerate containing morphine. Not deeming this a suitable time to commence the cod-liver oil, I met the different indications by anodyne expectorants, chalybeates, vegetable tonics and aromatic sulphuric acid, and, as I have already mentioned, counter irritation. The most prominent and distressing symptom—the pain, disappeared after the application of the second blister. Not so with the hectic, night sweats and cough. These persist-

ed, although, perhaps, in diminished degree, for more than two weeks, notwithstanding the exhibition of all the remedies of repute for such symptoms. At the end of this time I determined to resort to the oil, and commenced by administering it in the following combination:

℞ Cod-liver oil ℥iv.
P. Gum Arabic,
White sugar, of each ʒij.
Peppermint water, ℥iv.—Mix.

Dose, two table spoonsful morning and evening, and taken about two hours after a meal. This quantity being well borne, and producing no sensible effect on the disease, I gradually increased it, and as tolerance was established, carefully substituted the pure oil of the mixture. Very soon, within four days, the appetite improved, the cough abated, the sputa diminished in quantity, the hectic and night sweats disappeared, and the pulse became slower and of better volume. The patient was now taking one ounce and a half and two ounces of the pure oil during the day. The physical signs at this time remained the same. The treatment was persisted in, the oil being gradually augmented to double the quantity, and within a fortnight the patient had improved perceptibly in both flesh and strength. Her cough, however, continued troublesome, and hoping to assist the action of the oil, I prescribed,

℞ Morph acet. gr. iij.
Tinct. sanguin. canad. ʒij,
Vin. ant. et potass. tartrat.
Vin. ipecac. aa. ʒiij.
Syrup. prunus virgin. ℥iij.—M.

Dose, from fifty to seventy drops several times a day. This I think, was of service.

It was now two months since the patient had taken the first dose of the oil, and I seldom, if ever, saw a more marked improvement in the general condition of any one

in the same length of time. She had increased several pounds in flesh—her appetite was excellent, her pulse natural, skin pleasant. She slept soundly and was in high spirits. And what was equally gratifying, the mucous ronchus had almost entirely subsided, and the respiration had become clearer and drier. But the dulness, bronchial respiration and broncophony remained undiminished.

I now conjoined with the other treatment constant counter-irritation, alternately on the front and posterior aspects of the chest, and at the expiration of six weeks there was a slight increase in the resonance on percussion, and an improvement in the voice and breath sounds, though the latter continued distinctly tubular. The expectoration had ceased to be purulent and had become mucous, and was greatly diminished in quantity. Treatment continued.

In February, 1850, about seven months after I had taken charge of the patient, I was called to a neighboring village to which she had removed in the commencement of the winter, and while there made an attentive examination of her chest. There was still the slightest possible difference in the reasonance of the two sides, and a perceptible inequality in the breath and stroke sounds, with prolonged expiration which might, with strictness, be said to be even tubular in its character. "These signs," says Dr. Williams, "I have learned by the experience of many years, not to consider as exceptional against recovery, for they appear to be dependent on the puckering of the texture, often with pleural adhesions and old deposits in the bronchial glands, so frequently found after death at the summits and near the roots of the lungs of persons who have not for many years exhibited symptoms of any pectoral disease."

In point of general health, appearance, condition and so forth, the patient was never so well. She weighed

more than she had ever done, and but for the cough which still persisted—though it would not have been observed by other than herself, and was followed by no expectoration whatever—she presented every external evidence of complete restoration to health. Throughout the summer and fall I continued to receive intelligence of her of the most gratifying character, invariably representing that but for the cough, which she now referred exclusively to the throat, she was in the enjoyment of the most perfect health. And although I have not heard from her now for several months, I have every reason to believe that her health continues uninterrupted.

Case II.—On the night of the 15th of Oct. 1849, J. Y., aged 22 years and a half, was attacked, without appreciable cause, with violent hemoptysis. My father, Professor Yandell, was called to see him, and by the administration of large quantities of opium and sugar of lead, succeeded in arresting the hemorrhage. The following morning I visited Mr. Y. in consultation, and found him suffering with the symptoms usual in hemoptysis when dependent on tubercles, to wit:—Face flushed and expressive of great anxiety; pulse full, frequent and hard; respiration accelerated; occasional cough followed by the expectoration of small quantities of florid and frothy blood.

There was nothing either in the descent, occupation, or physical conformation of Mr. Y. which predisposed, in any observable degree, to the lesion on which hemoptysis almost always depends, to-wit: tubercles. He was born of healthy parents, was a stout and apparently hearty man, a brick mason, of sober, industrious and temperate habits, with finely developed chest, who had never before had hemoptysis or cough. The most minute and careful exploration of the chest revealed no loss of integrity in the respiratory apparatus, unless it was a scarcely appreciable alteration in the rythm of the

respiration, consisting in a slight prolongation of the expiratory sound. Resonance good; vesicular murmur soft, healthy; unattended by any of the rhonchi whatever.

It was believed that venesection was indicated and I accordingly bled Mr. Y. freely. The hemorrhage ceased; the pulse lowered, the sense of constriction about the chest of which he had complained, was removed, his breathing became natural, and his face lost the expression of anxiety which it had worn when I first entered the room. His bowels not having been opened for two days, a purgative was ordered, and with the view of preventing, as far as possible, the return of the hemorrhage, the patient was directed to take occasional doses of the sugar of lead, observe the most perfect quiet both of mind and body, use only the blandest and unirritating articles of food, and when thirsty, acidulated drinks.

I continued to see Mr. Y. daily, and sometimes twice a day, for several days, and at every visit I repeated the examination of his chest. Day by day the alteration in the respiratory murmur became more and more perceptible, and at the expiration of a week, there was evident dulness, and all the other positive signs of consolidation at the summit of the right lung. The change, it will be perceived, was rapid and of a character which required energetic treatment. Blood was abstracted immediately from the seat of the disease by the application of cups, which were followed, after being repeated two or three times, by the establishment of a large issue just beneath the clavicle which was kept open for several weeks. From the moment that the nature of the disease was clearly apparent the cod-liver oil was exhibited pure, and in large quantities. But notwithstanding, the tubercles, or, at least a portion of them, softened, and were expectorated in the characteristic form. Yet the original limits of the dulness did not increase, nor did the breath or voice sounds become manifestly more distinct, though the moist

rhonchi were superadded to the auscultatory phenomena already mentioned.

The patient was in the finest general health; his appetite and digestion were excellent, and he increased considerably in flesh.

In the spring—April 1850—he had ceased to expectorate pus, and his cough, which was very rare, was followed only by the expectoration of small quantities of transparent mucus. Corresponding with this encouraging change, the moist rhonchi had entirely disappeared, and the tubular character of the respiration was notably less intense—which was also true of the voice and dulness—though still greatly too much so to warrant any but an extremely guarded prognosis.

The season for building having commenced, I advised the patient to resume his work, which he did, and continued until the cold weather in autumn. Throughout the whole of this time his general condition was most satisfactory. He was almost entirely free from cough, and did not expectorate. The signs of solidification were much less apparent than they were six months before, though still easily detected.

On the 17th inst., Mr. Y. called to say that he believed he was well. After a careful examination of his chest I am of the opinion that the diseased portion of lung has regained its clearness of sound on percussion, and but for having *expected* to find dulness believe I would have discovered no difference whatever in the two sides. One of my pupils, Mr. Kennedy, in whose knowledge of physical diagnosis I have much confidence, was unable to detect any difference in the resonance of the two sides—There was a slight inequality in the breath and stroke sounds, though less than was to be anticipated where there had been so short a time before such extensive disease: Voice sound healthy; expiratory sound still somewhat prolonged.

Mr. Y. weighs sixteen or seventeen pounds more than when he commenced the oil, and has become, he says, fond of it.

I regard this case as one in which, to say the least, the progress of the disease has been retarded. The lungs have, I think, unquestionably been brought back from the stage of incipient softening to that of simple deposit, "which," as has been observed by Dr. Williams, "is tardier in its changes of increase or diminution, and may remain long stationary without any obvious alteration."

CASE III. *History.*—Mrs. M. is a mulatto woman, aged 29 years; mother living and healthy; father died of hip disease; married; no children; health never very good; subject to colds; never had hemoptysis. During the winter of 1847–8, had a severe attack of what her physician called bronchitis; had been sick ever since; from that time had constant night sweats and hectic fever, a hard, frequent cough, copious purulent expectoration, dyspnea, pain in the left side; loss of appetite, occasional diarrhea.

Condition at the time of visit in November 1849.—Patient confined to bed, excessively feeble, emaciated, pale, anemic looking. Pulse small, quick; skin dry, cough frequent, painful; sputa abundant, purulent. Respiration hurried, difficult, short. Pain in the left side, in front and behind. Hectic in the afternoon followed by exhausting sweats. No appetite; thirst.

Physical Signs.—Left side dull in clavicular, sub-clavicular and mammary regions. Bronchial voice, cough and respiration, very fine mucous rhonchus in same localities. Signs of a small cavern immediately above the nipple. Tubal respiration posteriorly. Rude respiration over the right side.

Treatment.—Cod-liver oil. The improvement in the condition of the patient after having taken it a few days, was manifest—at the end of a few weeks it was marvel-

ous. The night sweats and hectic had disappeared altogether, the cough had abated, the expectoration was less abundant and had become muco-purulent, the appetite had returned; the patient was able to be about her room; she had increased in flesh and strength, and but for great shortness of breath, would have been extremely comfortable. The only change which was at this time observable in the physical signs, consisted in a slight diminution in the frequency and regularity of the mucous rhonchus. The evidences of consolidation of the pulmonary parenchyma remained unaltered. In addition to the oil—which the patient was taking in doses of an ounce twice and three times a day—I effected counter irritation over the region of the dulness. This was kept up for several months, with, I think, the happiest results.

The patient kept her room throughout the winter. As soon as the weather became pleasant in the spring she commenced taking out-door exercise, and in the last week in April, walked to my office, distant a mile and a half from her house. The only inconvenience of which she complained afterwards was the shortness of breath. At that time—six months after I first saw her—the dulness had grown less, the mucous rhonchus had ceased, the voice, breath and cough sounds were less clear; the respiration on the right side had diminished in rudeness—the cough was only occasional, unattended by pain, and succeeded by the expectoration of small quantities of transparent mucus.

During the summer the patient continued to enjoy excellent general health, and but for the cough, would have indulged the hope that she was entirely restored. In September she was seized, after having been exposed to the night air, with pain in the left side, followed by high fever and aggravation of the cough. I was sent for but being absent from the city she was attended by another physician. The attack—which I take from her descrip-

tion of it to have been one of circumscribed pleurisy—confined her to bed for two weeks. Convalescence once fairly established, she soon regained her strength and flesh, but the cough continued hard, frequent and very distressing.

Examination on the 20th Feb. 1851.—General aspect and expression of patient good. Tissues solid, firm. Pulse and skin natural; appetite excellent. Rests well at night; attends to all the ordinary duties of house keeping. Breathing 20 in a minute, short. Cough hard, ringing; expectoration frothy, mucous, scanty. Dulness still perceptible, though the difference in the resonance of the two sides is very slight; respiration in the healthy lung puerile. Feebleness of the vesicular murmur over the whole of the left side. Respiration tubular in the mammary region. Prolonged expiatory sound; inequalities in the breath and stroke sounds. And yet, notwithstanding all this, *almost the entire left lung is permeable in some degree to the air.* Many of the cells have doubtless been entirely destroyed and others wholly obliterated; but others again, have sustained merely a loss of their normal elasticity. Auscultation over the middle and especially the inferior portions, both anteriorly and posteriorly, of the left side of the chest, conveyed the idea of a lung which had lost its elasticity, its natural capacity to expand and contract, rather than of a lung whose cells had been either destroyed or closed.

The only thing of which the patient complains is "shortness of breath." She is unable to walk rapidly or ascend stairs without a distressing sense of suffocation. The quantity of air capable of being contained in the chest is evidently much less than in health and by far too little for the purposes of physiological respiration. I regret that I am not provided with a spirometer by which I might ascertain the exact loss in the vital capacity of the respiratory apparatus.

CASE IV.—Charles, a mulatto man, entered the Louisville Marine Hospital on the 29th August, 1849. *History. Aet.* 59 years, of healthy descent and a long lived family. Has been a very stout and able-bodied man. In July 1830, while in Lower Canada, had a slight hemorrhage from his lungs; has had several hemorrhages since. Health however, continued good until the autumn of 1844; since then had failed rapidly; did no work after that time; had pains in his left side, severe cough, emaciated, lost strength, had night sweats and hectic. Came to the Hospital, he said, to die.

Condition at time of admission.—Patient excessively emaciated and feeble. Pulse small, weak; skin dry; cough frequent, hard; expectoration abundant, purulent; respiration accelerated, performed principally by the right side. Anorexia, thirst, hectic every afternoon, exhausting night sweats.

Physical Signs.—Cracked pot sound, and other cavern signs, at the summit of the left lung, over a space about the size of a goose egg. Dulness below this to the infra mammary region. Mucous rhonchus; a little sibilous. Respiration tubal. Prolonged expiatory sound. Voice and cough ringing. Resonance of the right side normal. Respiration rude.

Ordered cod-liver oil and iron, counter irritation over the dulness. In a very few days the cough abated, the hectic and night sweats ceased, the appetite improved, thirst diminished and patient became more cheerful, said he was "a hundred per cent better." Slowly the ronchi disappeared, gradually the cells became permeable to the air, and the resonance clearer. Patient undertook the duties of nurse to the negro ward of the hospital, which place he continues to fill.

Examination on Sunday, 23d inst.—Patient has gained several pounds in weight; health good; coughs still, expectorates a frothy mucus; no hectic or night sweats; only complaint is shortness of breath, but for this and his

cough, says he would be well; says he is incomparably better, in every respect, than he has been since the autumn of 1844; says he knows it is to the cod-liver oil that he owes his life.

Physical Signs.—Resonance of diseased lung greatly improved though still perceptibly less than on the healthy side. Cavern signs unchanged; no rhonchi; respiration feeble but rough and heard *over the whole of the limits of the dulness*, very distinct on full inspiration. Expiration more prolonged than I ever before observed in any case. Voice and cough sounds about as clear and ringing over the region of the solidification as they are in the first stage of pneumonia. Marked inequalities in the breath and stroke sounds. Respiration puerile on the right side.

Case V.—Mr. C. B...., a clerk, called to see me in July, 1850, to consult me relative to a cough, which he said was wearing him away.

History.—Aet. 25 years. Patient of small frame, florid complexion, blue eyes, light hair, married. Born of healthy parents, both of whom are now living at an advanced age; has several brothers and sisters, all healthy. When a child, had measles which left him with a cough—friends said he would outgrow it—had not done so. It was very troublesome, and often painful during cold weather; was a dry cough; had never alarmed him. Two years ago expectorated a small quantity of blood; had a recurrence of the hemorrhage in March last, became frightened, and endeavored to effect an insurance on his life. Was examined, he says, minutely by the physician to one of the Life Insurance Companies in this city, and was recommended as a person on whose life the Company would be safe in 'taking a risk.' Unfortunately for Mr. B. the Board thought differently, and declined issuing a policy.

Soon after the last attack of hemoptysis he commenced losing flesh, appetite and strength; suffered with palpitations of the heart; was harassed by cough, which was no

longer dry as it had previously been, but was followed by free expectoration of a ropy mucus, sometimes, he said, of the color of straw, and most abundant when he first rose in the morning. Took cold in the early part of July; cough was greatly aggravated, very painful; deprived him of sleep, said he thought sometimes it would kill him.

Condition at time of examination in the last week in July 1850.—Weighed 107 or 108 lbs. General appearance that of great feebleness. Complained of fulness at the top of right lung. Respiration accelerated, somewhat painful, short. Slight febrile excitement. Cough violent, occurring in frequent paroxysms. Expectoration muco-purulent. Chest narrrow, slightly flattened at apex; dilated imperfectly at summit of right lung.

Physical Signs. Right Side.—Dulness from the clavicle to the third rib inclusive. All the phenomena of consolidation of the lung at this point: in addition, an occasional mucous ronchus, very rare and composed of very large bubbles. Prolonged expiration: *Left Side*—Resonance good; respiratory murmur intensely puerile at the summit.

Patient complained several times during the examination of the sense of fulness at the superior portion of the right lung. I ordered cups over the part, and Mr. B.... afterwards told me that they removed the distress immediately. Patient was directed to take cod-liver oil in large quantities: says he commenced improving immediately, and for the first time in many months enjoyed uninterrupted rest at night. Shortness of breath grew less, palpitation disappeared, appetite and strength improved. His friends observed the wonderful improvement in his appearance. In spite, however, of this evident amelioration in Mr. B.'s general condition, the process of softening of the tubercles was not arrested, at least at the extreme summit of the lung, where a small cavern, about the size

of a hen's egg, was formed. In other portions of the diseased lobe the march of the malady was retarded—perhaps altogether arrested. In connexion with the softening of the tubercular matter and formation of the cavern, I am pleased to record the same remarkable fact which was observed in Case No. 2, to-wit: *that throughout the whole process, which lasted during three months, the patient had neither feverish excitement nor night sweats.*

Without stopping to record the result of the frequent and repeated examinations which I made of Mr. B.'s chest throughout the summer and fall, I will close the report of his case by stating the condition of his lungs at this time, as revealed at an exploration made on the 24th instant. Before doing so, however, I deem the following circumstances worthy of remark. Mr. B. weighed, as I stated, in July last, 107 or 108 lbs. He now weighs between 124 and 125 lbs., an increase of seventeen pounds. His muscles are firm and solid; he rolls ten pins several hours every day without feeling fatigued; his complexion is healthful; he has a very slight and not at all troublesome cough; expectorates a small quantity of healthy mucus; says he is in perfect health, and has never before felt so stout and hearty.

Physical Signs.—Hardly perceptible dulness in regions where, in July, there was almost flatness. Cavern signs under the sternal third of clavicle; inequalities in the breath and stroke sounds; prolonged expiration; during full inspiration the air penetrates well the cells; vesicular murmur feeble, but distinctly audible; voice and cough sounds normal. Respiration much less rude on the left side than in July, scarcely indeed, more than puerile.

Case VI. I first saw in June, 1848, twelve months before the republication in this country of the paper of Dr. Williams. The patient was a locksmith, aet. 23 years, and had been the subject of phthisis for several years. The disease occupied a large portion of both lungs;

had arrived at the period of ulceration with numerous anfractuosities in the clavicular and subclavicular regions; was accompanied by emaciation, cough, purulent expectoration, etc. etc. I prescribed the usual palliatives, gave the patient no hope or encouragement; expected him to die within a few months. In the autumn however, he traveled by slow stages, to New York, where he remained until October, 1849. While there he was directed to take cod-liver oil—commenced doing so in August. He said it was of great service to him, especially in arresting the hectic and night sweats, and alleviating the cough; his strength and appetite improved, and in October, he returned to Louisville. Called at my office for the purpose of having his chest explored. I found that the deposition of tubercles had been apparently steady and uninterrupted—that anfractuosities existed where before there were none; in a word, that the disease at one or other of its stages involved almost the entire lung. Cough, hard, frequent; expectoration abundant, purulent; respiration short, accelerated; *no fever or night sweats;* appetite good, spirits cheerful; strength, he said, was improving. Advised to continue the oil. In two weeks after I was summoned in great haste to see the patient; found him laboring under intense pulmonary congestion of which he died in twenty-four hours. Autopsy was not made.

I have reported the above case simply for the purpose of illustrating the power of the oil in arresting the hectic fever and night sweats of phthisis. The disease of the lung was, I think, far too extensive even when I first saw the patient, to expect that the oil would produce any other than palliative effects. The patient, however, assured me that it had been of incalculable benefit to him.

Louisville, Ky., Feb. 27, 1851.

Nashville Journal of Medicine and Surgery.

Art. III.—*A Case of Urinary Calculus, attended with peculiar circumstances and treated by Lithotrity.* By L. A. Dugas, M. D., Prof. of Surgery in the Medical College of Georgia.

The following case is reported because of certain peculiar features presented during its progress. The patient, Mr. John L. B., of Hall county, Ga., is 30 years of age, was kindly directed to my care by Dr. Richard Banks, the distinguished surgeon of Gainesville, and arrived here on the 5th of February last. Having suffered from early childhood with phymosis and an almost complete closure of the orifice of the prepuce, (which he believes was congenital,) the difficulty of voiding his urine caused this to distend the prepuce into a considerable bag, to accumulate enormously in the bladder, to stagnate in the pelvis of the kidneys, and to induce very great impairment of the general health. The preputial orifice was so small as not to admit, without much difficulty, the introduction of a knitting needle; the urine was therefore never passed off in a jet, but the patient was subjected to all the inconvenience of a continual stillicidium; he had frequent and violent attacks of nephritic pains, attended with protracted chills, fevers, and the usual concommitants of retention of urine. Yet it was not until the 20th year of his age that he sought professional aid and was circumcised by Dr. Banks. From that time his health improved rapidly; but he continued subject to occasional paroxysms of severe nephritic pains, which now became confined to the left side. These pains would extend down along the course of the ureter and continue one or more days, leaving him in a debilitated state, from which he would, however, soon recover. He is not aware of ever having passed gravel or anything like calculous matter, although his urine would sometimes present a very copious sediment.

This state of things continued until the middle of April last, when, although in good health and not having had any nephritic pain for about three months, he felt a calculus drop into his bladder. Attending to his usual avocations, he stepped out to urinate, did so without any difficulty whatever, and when in the act of buttoning up his garment, distinctly felt something fall into the bladder.

He immediately mentioned the fact to a friend, and added that "it must be a stone, for its fall produced a sensation like that of a buck-shot allowed to drop into a bag." A few hours afterwards, on again attempting to urinate, the stream was suddenly arrested by the engagement of the calculus in the urethra—the sensation being so distinct that he instinctively carried his hand to the perineum in order to force it out—but in vain;—and the same difficulty has ever since attended his micturition. These details are given as establishing conclusively the facts that he did know the *precise moment* at which the stone came into the bladder, and that this occurred so late as about *three months after the last nephritic attack.* He has experienced no pain whatever about the kidney since that. In May he was sounded by Dr. Banks, who readily detected the stone.

On the arrival of Mr. B. here, I examined him, detected the calculus, found it to be small and determined to crush it as soon as circumstances would permit. The patient was directed to use dilating bougies, to remain quiet, to drink freely of slippery elm tea and super carbonate of soda, and to take a hip bath every night. In a week he was found to be sufficiently prepared, and (on the 12th of February) the operation was performed with Heurteloup's "*brise pierre,*" as modified by Charriere. The bladder being filled with tepid water, the calculus was readily seized and crushed three times, without pain. A few fragments were passed off with the water and others during the night with the urine. On the following day, finding the patient very comfortable, without any symptoms of irritation, and very anxious to get home as soon as possible, I again introduced the instrument and crushed the remaining fragments, sufficiently to allow them all to be passed out during the night. He now expressed himself "entirely relieved, and feeling like a new man." The baths, etc., were continued, and on the 16th February, I explored the bladder carefully, without being able to detect any vestige of the stone. The patient was therefore discharged.

The dimensions of the stone were accurately ascertained by the crushing instrument to be about one inch in length and half an inch in thickness. Professor Means having kindly subjected some of the fragments to analysis, in-

forms me that they consisted of Oxalate of Lime. The stone was exceedingly hard, and tested to the uttermost the fine temper imparted to the metal by Charriere's unrivalled skill.—*South. Med. and Surg. Jour.*

REMARKS.—This certainly presents "certain peculiar features," both in anatomy and surgery, and we are utterly at a loss to understand some of them. The fault may be ours, but there can be no wrong in stating the difficulties.

1st.—It is somewhat remarkable that a phymosis should have created so great a resisting power in the prepuce as to dilate even the ureters. This strikes us as a very remarkable peculiarity. The wonder is increased considerably when we find that notwithstanding the *ureters* were thus dilated so as to permit the passage of a stone of novel dimensions, the *urethra*, which should have synchronised liberally in the dilatation of the ureters, was so little inclined towards anything of the kind, that it stopped the stone which had fallen through the ureter! The extravagant dilatation of the ureter is inexplicable; but, assuming the claim as a fact, the dilatoriness of the urethra is rather marvellous.

2d.—The statement of the patient that he "heard something drop," and therefore knew the exact moment of the entrance of the calculus into the bladder, seems to have made a profound impression upon Professor Dugas, for he unhesitatingly gave credence to the statement. The patient may be excused for thinking that a calculus could fall from the ureter into the bladder, but we have some difficulties in our faith. The ureters enter the *bas fond* of the bladder, very obliquely, and a stone would have to fall *up* in falling from the ureter into the bladder. And then when we remember the pathological truths of Mr. Aldridge, which seem to show that the oxalate of lime is not secreted in the kidneys, when we remember that there

is no kind of evidence that the ureters in this case were dilated even in the slightest degree, and that the passage of a mulberry calculus through the ureter would have made a man feel a multitude of other things besides the falling of the calculus, we must remember that we have before us what may be called the difficulties of faith.

3d.—We feel some difficulty about the dimensions of the calculus. We have seen between two and three hundred specimens of calculi, and have heard from various other collections, and we have neither seen nor heard of any calculus, except this one in Georgia, that was just one inch in length, and a half inch in thickness. These dimensions are such a wide departure from that uniformity of proportion found in calculi, that we think there must be some mistake in Professor Dugas's measurements. There must be a want of accuracy. Did it not strike the Professor that the growth of his specimen was altogether too rapid for a case of oxalate of lime calculus? There seems to us a wonderful celerity in every branch of this case.

4th.—The calculus in this case was "oxalate of lime," and the stone was crushed with Heurteloup's "*brise pierre*" at two sittings, on two consecutive days, and the fragments were allowed to be passed off during the night. This is certainly the most remarkable achievement yet effected by Heurteloup's instrument. It is enough to excite the envy of Civiale, and put an end to the lateral operation. If a calculus of oxalate of lime, one inch long, and a half inch thick can be utterly crushed in two sittings, in two successive days, so that no vestige of it is left, what apology can there be for cutting instruments for lithotomy? We have seen various efforts with Heurteloup's instrument, and have been sometimes surprised with the result, but this success in breaking down, in two sittings, a stone of oxalate of lime, of the size of the one recorded by Professor Dugas, certainly takes the lead of all achievements

we know of in lithotrity. We have seen vesicle stones of oxalate of lime removed by the lateral operation after lithotrity had failed, and in which the most persistent efforts with the drill for many sittings had failed to make any more impression than if it had been used on a piece of Syenite. But if the improved apparatus of Heurteloup can break up at two sittings, a mass of oxalate of lime, and remove it entirely in two days, lithotrity is making rapid strides, and M. Roux is an accredited prophet, when he says: "lithotrity has assumed her function, and no surgeon hereafter will attain sufficient experience to reach the highest degree of adroitness in lithotomy."

We suppose these new claims of lithotrity will come before the American Medical Association, and if they receive the endorsement of that body, we may expect to see renewed evidences of the envy felt by European surgeons for the rising reputation of American Surgery, and we shall hear them again denouncing American surgeons for a proneness to exaggeration. B.

THE WESTERN JOURNAL.

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LOUISVILLE, APRIL 1, 1851.

UNIVERSITY OF LOUISVILLE.

The annual commencement in the Medical department of the University of Louisville was held on the evening of the first day of March, on which occasion the degree of M. D. was conferred on eighty-one students who had passed satisfactory examinations before the medical faculty. The honorary degree of M. D. was at the same time conferred on Dr. Edward B. Haskins, of Clarksville, Ten. The Valedictory Charge to the graduates was delivered by Prof. Yandell. The whole number of students in this department of the University of Louisville during the last session, was 282.

Our readers at a distance may have had their attention drawn by the discussions in the city newspapers to a proposed change in the mode of choosing the trustees of the University of Louisville, which, it has been feared, might jeopard the prosperity of this institution. The new city charter lately passed by the Legislature provides for the election of trustees by the people, but in as much as many members entertained doubts respecting the constitutionality of this clause in the charter, it was enacted that it should not take effect until the question had been adjudicated by the Jefferson Circuit Court. If the decision of the Court should be adverse to the new charter, the trustees will continue to be appointed as now.

If the charter should be decided to be constitutional, and a board of trustees be elected in a period of excitement, some of the friends of the school are apprehensive of consequences the most injurious to its prosperity. It is impossible to predict what the result would be, but it is proper to state that in the opinion of many of its most judicious friends no mischief is likely to follow such a change. A belief is confidently entertained, that a wise and conservative board would be elected by the people, and that the institution would continue to prosper as it has done under the able administration of the trustees who have had control of its affairs. It is to be remembered that we live in a democracy, and, particularly, that the medical school of Louisville was founded and endowed by its citizens; and if the people elsewhere and in other elections have been found capable of choosing wisely and well, we do not see any reason to doubt that they will in this case, if the duty be imposed upon them, select the men best qualified to guard and advance their interests. Demagogues, it is said, and men seeking places in the school, will mislead the people and cause the board to be filled by radicals and disorganizers, in the hope that in the revolutions that must ensue they may stand a chance to come in. This is certainly the danger to be apprehended, but it is not peculiar to such an election, and as it has been generally averted in States where all offices, from that of supreme judge to that of town constable, are filled by the people, let us hope that the same conservative principles will prevail there when every election shall have become popular.

For ourselves, we are free to declare that, whatever be the mode of electing its trustees, we expect the medical school of Louisville to continue to flourish. It has been planted too securely, and has established itself too firmly in the confidence of the profession to be seriously affected by these transient local agitations. We should be sorry to see its present excellent board of trustees superseded, but if such should be the decision of the courts we shall still hope to see a judicious board elected by the people. It is the interest of a few individuals, if they cannot obtain possession of its places, to destroy the school, and they conceive that there is no better way of accomplishing their ends than to keep up this agitation; but it is the interest of the citizens to protect and preserve an institution which is one of the sources of the city's prosperity, and they will not fail to do it. This contest has been going on, unintermittedly, for eleven years, and yet all this time the school has grown and flourished in a manner remarkable even for our country of

rapid development. Under one form and another, but still by the same selfish, disappointed persons, it has been continued from year to year, but without any effect upon the prosperity of the school. We suppose the war will still be renewed however the present question may be decided, and the school, no doubt, will go on to prosper as heretofore.

Y.

MEETINGS OF LEARNED BODIES.

It has been published incorrectly several times that the American Medical Association meets on the 2d Tuesday in May, instead of the *first* Tuesday. Charleston, the place of meeting, has long enjoyed a high reputation for the elegant hospitality of its inhabitants, and we feel quite sure that they will do their part towards rendering the next meeting one of the most pleasant that this learned body has held. When the American Association for the Advancement of Science met there a year ago, the City Council came forward and defrayed the expense of the meeting, and in addition to this, we believe, the members who traveled by railroads were not charged for their conveyance going or returning.

Cincinnati is now emulating the noble example of Charleston. The next meeting of the American Association for the Advancement of Science takes place, in that city, on Monday, the 5th of May, and from the Circular of the Secretary, which we have just received, we perceive that the local committee of the Association have "provided for the gratuitous entertainment of all members attending."

These facts speak well for the liberality and intelligence of those cities. In honoring science they do honor to themselves. Both meetings in May are sure to be large, for men of cultivation and refinement are naturally drawn towards communities where the objects of their tastes and affections are duly appreciated. We can hardly imagine anything more agreeable than to be present at the deliberations and discussions of either of these bodies, and we would advise all who have it in their power to attend.

Y.

DR. WARREN'S ADDRESS BEFORE THE AMERICAN MEDICAL ASSOCIATION AT CINCINNATI.

We have just received, from the hands of its venerable author, a copy of this interesting address. There are many portions of it that have

given us a great deal of satisfaction, but we regret, that in the history of modern surgery, Dr. Warren, when addressing such a body as the American Medical Association, should have confined his history almost entirely to Europe and to the vicinity of Boston. We wish no undue importance to be assigned anywhere, or under any circumstances to Western surgery, but we cannot think it right to slur over its claims without even an allusion to its merits. The name that has given imperishable honor to American lithotomy, which has given the most exalted character to various departments of surgery is not even hinted at in the address of an American surgeon, who speaks largely of lithotomy and calculous diseases!

With the exception of this defect, we admire the general tenor of Dr. Warren's address. It is beautifully printed, and as neatly published as any European house could have done it. B.

PROCEEDINGS OF THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA, BEGUN AND HELD IN THE CITY OF MOBILE, DECEMBER, 1850.

We have read these proceedings with interest, and we are pleased to see the laudable emulation displayed among the members for the elevation of the medical profession.

The appendix to the proceedings contains an able address, by the President of the Association, Dr. Lopez, Dr. C. F. Percivall's Report of Diseases prevailing in Church Hill, and its vicinity, An account of the Medical Botany of Sumter county, Alabama, Report on the Diseases of Mobile, Diseases, etc. of Lowndesboro', and its vicinity, by Dr. Wooten, on the Diseases of Sumter county by Dr. Anderson, Report of a "wound of the heart; penetrating the right ventricle," from which the patient recovered, by Chas. E. Lavender, M. D., on the Diseases of Wetumpka, by Dr. T. W. Mason, notes on Marasmus, pertussis and typhoid fever, by Dr. Reese, Report on the Diseases of the western part of Lowndes county, by Dr. Reese, Clinical facts relative to the administration of cod-liver oil, by Dr. W. H. Anderson. The Valedictory Address was delivered by Dr. Lavender.

The proceedings of this association are highly creditable to the physicians of Alabama, and they cannot fail to be serviceable to the progress of medicine in the South. B.

NASHVILLE JOURNAL OF MEDICINE AND SURGERY.

This is the title of a new Medical Journal, the publication of which has just commenced at Nashville, Tenn. It is edited by W. K. Bowling, M. D., Professor of the Institutes and Practice of Medicine in the Medical Department of the University of Nashville.

We cordially welcome Dr. Bowling to the editorial corps, and wish him abundant prosperity in his new enterprise. If the medical profession are true to their best interests they will secure success to the Nashville Journal of Medicine and Surgery. Everything that keeps the busy practitioner of medicine in communication with the active minds of the profession should be looked upon as an object worthy of favor. We should say more on this subject, if our waning space did not forbid.

B.

THE STETHOSCOPE, *and Virginia Medical Gazette*, a monthly Journal of Medicine and the Collateral sciences. Edited by P. Claiborne Gooch, M. D.

We owe our able confrêre of Richmond, Va., an explanation of our silence, heretofore, respecting his new periodical, and he will pardon our apparent remissness, when we inform him that owing to a mistake at the post-office, we did not receive any of his numbers in time to refer to them earlier than now.

We give the Stethoscope a cordial welcome, and wish it a prosperous career.

The Stethoscope is published at Richmond, Va., at three dollars per annum. B.

OMISSIONS—Several valuable papers have been crowded out of this number. B.

THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY.

EDITORS.

LUNSFORD P. YANDELL, M. D.
PROFESSOR OF PHYSIOLOGY AND PATHOLOGICAL ANATOMY IN THE UNIVERSITY OF LOUISVILLE.

AND

THEODORE S. BELL, M.D.

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THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY.

MAY, 1851.

ART. I.—*An Anomalous Case of Horny Excrescences.* By ASBURY EVANS, M. D., of Covington, Ky.

Mrs B——, of Grant county, called on me about the first of February last for treatment of a singular affection of the nails and fingers of both hands.

Her general appearance was that of feebleness, but not positive ill health. She had been married several years, and is the mother of three healthy children. Six months before she presented herself at my office, and immediately after an attack of epidemic dysentery, she had first begun to be affected by the disease. The affection had made great progress in some of the fingers, while in others it had just begun: that which was most diseased was the right thumb; the least so was the left little finger.

The disease began by the deposit of a horny layer beneath the fine extremity of the nail, and then extended inwards, separating the cutis and nail. Successive layers

were added, until a mass was produced; having the shape of a wedge with the base looking towards the end of the finger. Upon the further growth of this excrescence, its base would raise up the end of the nail while its edge would continue to insert underneath the length of the nail. The presence of this foreign matter and the upturning of the nails would in no great while produce inflammation of the cutis upon which the horny substance laid, and along the edges and at the roots of the nails, and finally ulceration would result, particularly at the roots of the nails. Eversion of half the length of the nail of the right thumb was produced, and the cutis from which it had been removed was inflamed and deeply ulcerated—the whole exhibiting a most unseemly appearance. Such was the soreness of many of the fingers that, in addition to the pain and uncomfortableness of her situation, Mrs. B. was wholly deprived of the use of her hands.

She had been under the treatment of two physicians, and had, besides, gone the usual round in the employment of salves, ointments and teas so liberally prescribed by the male and female Lady Bountifuls, indigenous alike to country neighborhoods and wealthy and fashionable cities, without improvement, except for a short time, when suffering from a slight ptyalism.

The horny excrescences, seemed to me, to result from an abnormal action of the cutis upon which the nails rest for support, and which had assumed the office of secreting nail matter that, in health, belongs solely to the matrix.

The inflammatory and ulcerative processes were the mechanical consequences of the eversions of the nails, produced by the wedges of horny matter thrown off from the cutis. To subdue this unnatural secretory process of the subungual cutis, was what appeared to be demanded for a cure.

The utility of gentle mercurialization in *Onychia Maligna*, which the ulcers she had, much resembled, and the fact that when slightly salivated she had been benefited, determined me to put her upon the use of mercury. I accordingly prescribed pills of blue mass and opium, daily until her mouth was sore; and applied Fowler's Solution three times a day to the inflamed and ulcerated parts. In ten days her mouth was sore, and the fingers presented a greatly improved appearance. I then gave her large doses of the hydriodate of potash in the compound decoction of sarsaparilla.

I saw her a few days since. Her nails had grown out, and although a little warped, were healthy; the inflammation had disappeared and she had as good use of her hands as before the attack.

March 23d, 1851.

ART. II.—*Pharmacy of the Greeks and Romans.* Translated from the French of M. CAP, by W. H. COBB, M. D.

Among the Greeks, Hippocrates sums up pretty completely the state of pharmacy; while among the Romans, Galen furnishes us with the most exact account. In the writings of these two masters of their science, then, must we look for the principal features of the history of our profession, at the epochs when it was in the most advanced state, in ancient times. Many catalogues of the simple medicines used by Hippocrates have been published. Virey, and after him Daniel Leclerc, collected a catalogue numbering about three hundred substances. K. Sprengel has given a much more exact account of Hippocrates. Dr. James, in the introduction to his Medical Dictionary, furnishes us with a long list of medicines, simple or compound, made use of by Hippocrates—a list

drawn equally from the writings of Polybius, Thessalus, Dracon, and others who have, as we know, added their works to those of their master: and Fourcroy has extracted from them some general remarks, interesting both as regards the history of our science and its application.

Among the medicines comprised in these different lists, we notice quite a large number without any well-marked action upon the human economy. Leeches do not figure there, and many drugs known at the time of Galen occupy no place there.

They used internally certain preparations of copper; they were acquainted with canella, cardamon and pepper; from Egypt they received opium and scammony; butter was scarce, and but little known; cantharides and other insects were used internally; they were acquainted with the exhibition of the fetid gums, in the treatment of the neuroses and hysteria; they seasoned their food with the umbelliferous and labiate plants. Into the composition of their collyria, entered the bile of many animals; but by the term collyrium, they designated, as we shall see hereafter, a very different class of remedies from those which we signify at the present day by the same name.

With Hippocrates, therapeutics was confounded to a certain extent with dietetics, for he expressly says "that the food and drinks which man uses in a state of health, ought also to serve him when he is sick." He examines, in fact, the greater part of aliments in this double point of view, and his account of the qualities of the flesh of the dog, fox, horse and ass, would lead us to think that these viands were then in general use.

The broth of barley, diet, and repose, were the means which he employed at the onset of acute diseases. He added to the ptisan of barley a little vinegar, oil and salt, and occasionally anise and leek. The ordinary beverage of the sick was composed of 8 parts of water to 1 of honey, to which was sometimes added vinegar. The

cyceon was a drink, into which entered rice, the seeds of the anise, celery, coriander, wine and wheaten flour.

Hippocrates employed milk and whey, both as food and as medicine; not only the milk of the cow, but of the goat, mare and she-ass, which he prescribed in a large dose as a laxative.

Sudorific medicines were then unknown. To excite perspiration, they employed baths, fumigations, frictions, and the heat of the sweating room. The diuretics used internally were sweet wine, garlic, onion, leek, cucumber, melon, citron, celery, bas trefoil, fennel, capillaire solanum, oxymel, hydromel, and the cantharides deprived of their legs and wings, and mixed with honey and wine. Narcotics, or rather the somniferæ of Hippocrates, were the poppy, opium, the euphorbia peplus, mandragora and henbane; his febrifuges, absinthium, little centaury, and some other indigenous bitters. To excite emesis, he employed the assarabacca, the white hellebore, and a plant named sesamoides, and which Dioscorides calls the Hellebore of Anticyrus; or he gave them to drink a large quantity of some laxative, followed by a decoction of lentils and hyssop with honey and vinegar.

His laxatives were mercury, cabbage in decoction, whey, and the milk of the she-ass, salted. He employed suppositories and lavements. The suppositories were composed of honey, mercury, salt, nitre, the powder of colocynth, and other irritating substances; they were sometimes round, like a ball, and sometimes of an elongated form. The lavements were composed of a decoction of the leaves of the beet, with the addition of honey, nitre, and other laxative substances.

The purgatives of Hippocrates were numerous. He employed black and white hellebore, the berries of the daphne mezereum, the daphne thymelæa, euphorbia peplus, thapsia, swallow thorn, elaterium, colocynth, scammony, magnesian stone (a variety of loadstone), cnicus, etc.

He admitted purgatives, directed specifically to the bile, phlegm, melancholy and dropsy. To clear the head from its affections, he caused his patients to inspire by the nostrils, the juice of the celery, divers aromatics, and powders composed of myrrh, the flour of brass (oxide of copper), and white hellebore; as an expectorant, he applied to the base of the tongue the root of the arum triphyllum, boiled in water, with honey, oil and salt.

External Medicaments.—Fomentations were arranged under two heads, wet and dry. The first were partial or local baths of lukewarm water, or of the decoctions of certain plants. They also applied upon the part affected a leathern bottle, bladder, or some kind of vessel, filled with warm water; at other times a sponge, soaked in a decoction of barley, bran, or the seeds of the heath peas. The dry fomentations were made of salt, roasted millet, or of aromatic substances, enclosed in little bags and applied upon the part affected. For fumigations, they employed the vapor of water, either pure or impregnated with divers medicinal substances; for example, they heated pieces of iron, plunged them into urine, and directed the vapor upon the part. They were also made with the smoke of resins, bitumens, and aromatics, burned.

The gargles recommended by Hippocrates in diseases of the mouth and throat, were composed of a decoction of origan, savory, celery, mint with a little nitre, honey and vinegar. The oils and unguents were employed to anoint the body, soften tumors, and dress wounds. The oils were pure or compound: the pure oil was that of the olive; the compound oils, as those of roses and myrtle, were obtained by infusion. The susinum was prepared from the white lily and aromatics; the narcissum had for its base the narcissus. The netopum and the metopium, cited by Dioscorides, and the mendosium, of which Galen speaks, were preparations of the same class, even more

complicated. Hippocrates bestowed the name of cerate upon an unguent composed of oil and wax; another species of cerate was prepared of the fat of the goose, turpentine, the resin of the mastich, wax, and the oil of roses. When to the simple cerate pitch was added, to give it consistence, it obtained the name of ceropissus.

The cataplasms were composed of vegetable powders, mingled with the juice of plants, to which was sometimes added a small quantity of oil or of an unguent. In quinsy, they applied to the neck a cataplasm of the meal of barley with wine and oil. The emollient cataplasms were composed of the leaves of the beet, cooked in water, with the addition of the leaves of the olive, fig, or oak.

Internal Medicines.—The fluid preparations administered internally, included decoctions, infusions of vegetable substances, in which they sometimes dissolved powders, the juice of plants, the mixtures of wine, honey, oil, vinegar, and other simple and compound liquids. They also employed the medicinal wines prepared by infusion.

The solid preparations were composed of the inspissated juices (extracts), gums, resin, and various powders, the whole mixed with honey and other ingredients, and fashioned into the proper shape. This is, then, we see, the point of commencement of antidotes and electuaries, preparations which in subsequent ages, and even in our own times, occupied so prominent a place in pharmacy. The collyria were solid masses, of the length and shape of the finger, intended to be introduced into a cavity, like suppositories and pessaries. The troches were of the same shape, and used for the same purpose, as at the present day. The pectoral remedies were medicines of a soft consistence, placed upon the tongue and swallowed slowly; honey and various aromatic or mucilaginous powders formed their base. Finally, they were acquainted

with the mels, oxymels, and confections, but not with the syrups, whose name, derived from the Arabic language, denotes a much more recent origin. In scanning the writings of this epoch, we find no mention of the different operations employed for obiaining all these products. That the manipulations could not have been very complicated, one can very readily perceive. Digestion, infusion, decoction, the expression of the juices and their inspissation by heat, and pulverization, were the methods most frequently employed. Evaporation, calcination, fusion, perhaps even sublimation, were known to the operators of that period. But if we except lixiviation, the crystallization of salts, and the extraction of metals, they practised no one operation truly chemical, nor did they have any idea of combinations of this nature. As the healing art had not as yet been divided into its different branches, the physician prepared the medicines, as well as prescribed them. Hippocrates prepared with his own hands the greater number of his medicinal agents, or had them prepared by his servants, who were instructed to that effect; so also did all the other physicians of his time. We know well that he carried his medicines with him when called by the inhabitants of Abdera to cure Democritus.

As we leave farther and farther behind the epoch in which the school of Cos shone forth, and approach that in which the schools of dogmas and methods reigned, we cannot fail to mark the increasing tendency to an indefinite complication, which has found its way into therapeutics and pharmacy.

The summum bonum of the art, for a physician of that period to attain, and sometimes the chief element of his reputation, was the composition of an electuary, or of an antidote, in which was heaped together a crowd of substances endowed with dissimilar properties, bestowing upon it remedial virtues in a great number of diseases.

The physicians of that period believed that each medicinal substance possessed, relatively to a given disease, an absolute curative property, but that this property was accompanied, with regard to the different organs, by a physical action, often in direct opposition to its medical efficacy. Consequently, they provided each principal drug, with an escort of many others, intended, some to increase its medical activity, and others to modify its influence upon the organism; and his chief care was expended upon the choice of ingredients which should serve as a bond of union, a vehicle for all this mass, for this strange chaos of which the electuary was composed.

We have often said that the word electuary was derived from the Latin verb *eligere*, to choose; nevertheless, Cœlius Aurelianus, who flourished about the time of Galen, places electuaries by the side of the eclegmes, whose etymology we have given above, as derived from the Greeks, and gave to them the title of electarium, whence most probably arose electuarium.

As for th· word antidote, (anti dolos, given against,) it is a generic term, applicable to all compound medicines. Galen called all medicines administered internally, antidotes; thence, the word antidotary was for a long time employed synonymously with dispensary, or pharmacopœia. Later, this term signified, as it does at the present time, a remedy given to counteract a poison. At this epoch, there were antidotes against phthisis, contusions, colic, calculi, pleurisy, gout, etc. Galen divided them into three classes: remedies against poisons, against the bite of venomous animals, and against excesses of all kinds. To his eyes, the Theriaca Andromachi united all these three virtues. The consistence of the electuaries and the solid antidotes was about the same; their taste often disagreeable. From them they made little balls of different sizes; those that had the form of a berry, or a pea, were named globuli—glomerami et pilulæ (in Greek,

kokkos); others, of the shape of a bean, or of the seed of the lupine, were termed pastilli and trochisci, from the Greek word trochiskoi.

The names given by the Greeks and Romans to their medicines, related oftentimes to their uses; thus they called those remedies that were employed against diseases of the lungs, and trachea arteriacæ; those employed for alleviating cough, bechicæ. Pills, placed under the tongue and allowed to melt slowly in the mouth, were styled hippoglottides. The eclegmes of a softer consistence, were composed of gum tragacanth or arabic, of the juice or powder of liquorice, myrrh, honey, wine, saffron, and they sometimes added diacodion or opium. Then they were named anodyne, or paregorica.

The liquid medicines did not differ remarkably from those of Hippocrates. The drinks most employed were infusions, decoctions, and the juices of plants, more or less diluted. Sometimes they disguised the antidote when taken, in water, wine, or hydromel. The liquid medicines generally bore the name of potions. Those obtained by decoction, were the decocta and apozemata. Galen also gave the name of decocta to water which had been boiled and afterwards been cooled in the snow. There were also drinks which they took in the state of health as well as in sickness: thus they drank wine in which were infused wormwood, pepper, and casamum. To these they added honey and other ingredients, which gave the names to these drinks. They also used water in which were boiled apples and roses, with the addition of verjuice, the juice of the pomegranate, the berries of the myrtle, and honey. The drinks compounded of honey, wine, and aromatics, were termed propomata. Paulus Ægineta and Nicolaus Myrepsus have preserved many recipes of them. A variety of propomata, drunk iced, was called recentatum. At the commencement of their

repasts they drank compound wines, called condita, to excite the appetite.

Vinum mulsum, or simply mulsum, was a mixture of 4 parts of wine to 1 of honey. The hydromel, composed of water and honey, was called indifferently aqua mulsa, or mulsa. The hydromelon was formed of hydromel and the juice of quinces; to the hydrorosatum they added roses instead of the juice of quinces. When they mixed these four substances, they obtained the rhodomelon and rhodostacton, which bore a close resemblance to our mel rosae. Modern pharmacy has preserved the oxymel, a compound of honey and vinegar, and the oxycrate, a compound of vinegar and water. From honey and verjuice were prepared the omphacomeli; from honey and the juice of the myrtle, the myrtites; and from honey and the juice of the pomegranate, the rhoites. They made similar preparations from the most of fruits. The apomeli was water in which was boiled honey-comb.

Among the remedies applied externally, the oils held the first rank. They were prepared by infusing simples in the oil of the olive, walnut, almond, and sesame; and when the oil was highly charged with the active principles of the plant, they gave it the name of unguentum. This word was applied to every preparation which served to anoint the body, but more especially to the aromatic oils and liquid perfumes. The unguent of roses was the most employed. The unguents were also called acopa, (from a, privative, and kopos, fatigue,) because they were often employed to lighten fatigue. The same appellation was bestowed upon all the preparations used externally for the same purpose, as the mixtures of wax, of honey, of turpentine, of various resins and axunge: of this class was the cereleon, a semi-fluid compound of wax and oil; when aromatics entered into its composition, it was termed myracopa. The cerate contained not only a large proportion of oil, but there were also added divers pow-

ders. According to Galen, the cereleon and the acopa were unguents remarkably fluid; next came the cerates, and lastly the plasters. Paulus Ægineta says that the illitiones were even more liquid than the acopa. The oxyrhodines were a mixture of vinegar and oil of roses. The term plaster was applied not merely to those preparations into which entered a larger proportion of wax than into the cerates, but also to those to which were added metallic powders, as litharge, ceruse, the oxide of copper, or even the earths, chalk, etc. Those of the softest consistence were named lissaræ, plasters containing fat, or parygræ, moist plasters; while those in which dry or solid substances predominated, were termed alipanda, plasters without grease, or amolyntha, plasters which did not soil the hands. This last condition was in fact the criterion by which they judged of the proper consistence of the plasters.

From the plasters they formed little masses of a circular shape, and of the length of the finger, which they termed magdalidæ and rotundæ, and which correspond to our magdaleons. The malagma was a compound of gums, aromatics, salts, and other substances, with the addition of a little oil, wax, or axunge. They resembled very closely plasters, and were used to soften and discuss tumors. At other times they were merely gums and resins, dissolved in wine or vinegar. The word malagma was also extended to other remedies of the same consistence. The epithems differed from plasters, and the malagma in this respect alone, that they were not applied upon tumors or wounds, but upon the skin, to act sympathetically (upon it) or by absorption, oftentimes upon the stomach, to strengthen it, or upon recent wounds, as a hæmostatic. Besides the ceropissus, composed of pitch and wax, the dropax were plasters which they applied upon the epidermis, and which they tore from it by force, for the purpose either of reddening the skin, of denuding

it, or of acting as a depilatory. They sometimes added salt, sulphur, or the powder of the pyrethrum.

Into the cataplasm, ordinarily formed of plants, meal, or the soft part of bread, cooked in water or other liquid, there sometimes entered oil, honey, the meal of the flaxseed and the fenugreek, figs, yeast, and many other substances, some astringent, others emollient. When they wished to irritate the skin, they added to them mustard in powder, and even cantharides, and then styled them sinapisms.

The smegma of the ancients served to cleanse the skin, to allay pruritus, and even as a dentrifice. Into its composition entered the meal of beans, the seed of melons, the horn of the stag, pumice stone, the bone of the cuttlefish, antimony, molten lead, sulphur, sal ammoniac, nitre, alum; sometimes stavesacre, hellebore, pepper, cardamon, gums, resins, and the juices of plants, all mixed in honey. With it they rubbed the body before entering the bath. Certain aromatic powders, bearing the name of diapasmata, were spread over the body to absorb the perspiration. When they wished the smegma to produce a depilatory effect, it contained orpiment, sandarac, and quick lime, and received the name of psilothron. Among the opulent Romans, the slaves rubbed the bathers with smegma composed of aromatics of the choicest varieties, brought from all the nations of the world, and enclosed in vessels of gold, alabaster, or crystal. These were the amoricinum, magalium, nardum, and a host of others, to whose names were added the most wonderful epithets, as in the case of electuaries.

The collyrium, so termed from its resemblance to a rat's tail, (colourion, or colobe oura, a tail cut off,) was, as among the Greeks, of a solid consistence, circular in form, and gradually tapering from one end to the other. The tents, plastic masses intended to be introduced into fistulæ or the natural cavities, also bore the name of col-

lyrian; finally they gave the same name to certain compounds, which they dried for their better preservation, and pulverized when they wished to use them. Of this number were certain preparations used in diseases of the eye, and it was by an extension of the term that the name collyrium was applied to the remedies employed for this purpose. The dry collyria were composed of metallic powders, as white lead, oxide of zinc, verdigris, brass, and cadmium, besides saffron, myrrh, opium, aloes, the juice of roses, fennel, and celandine. The liquid collyria were composed of honey, balm of Gilead, the gall of the viper or of the partridge, and the juice of the fennel.

Troches, called also by the Greeks phthoides, were little masses of various forms, generally semi-circular, and not weighing more than a drachm. Some were employed externally, and resembled very closely the collyria in their composition, while others were employed internally. Some they placed in the mouth to perfume the breath; others were burned as perfumes. The troches termed hedychroi were composed chiefly of aromatics. The masses into which they were formed received the name of massa hedychroum.

With the exception of gargles, the remedies used as injections were called clysma; those inspired by the nostrils, errhyna.

We have said that, from the time of Hippocrates up to that of Galen, the materia medica was enriched by quite a number of new remedies. It was during this period that Dioscorides and Pliny collected the numerous documents of which natural history, as relating to medicine, was composed. As to the pharmacy of the same epoch, it is to be found complete in the writings of Galen, who resumed those of Celsus, Andromachus, Asclepiades Pharmacion, Archegenes, and all the authors who had preceded him upon the same subject. Besides the articles which they collected from the two organic kingdoms,

they also borrowed much from the mineral. Many salts and metallic oxides entered into the composition of their remedies. They took internally various kinds of salt, pulverized gums, the earth of Lemnos (a variety of chalk), the Jewish stone (the spines of the fossil sea urchins, which they found in Palestine and employed as a remedy for strangury), bloodstone, common salt, nitre, sal ammoniac, fossil salts, potassa obtained by burning rushes and reeds and lixiviating the ashes, medicinal salt, the salt of vipers, the formula for which has been handed down by Pliny and Dioscorides, and finally purgative salts, probably the tartrates, whose activity they augmented by the addition of scammony.

The mineral waters already enjoyed pretty general reputation. They were used as baths, and taken internally. Archigenes had classed them, after their principal constituents, into aluminous, sulphurous, bitumenous and saline. The Greeks called them autophue, which corresponds to the Latin aquæ naturales, or sponte nascentes.

The pharmaceutical manipulations were but little more complicated than at the time of Hippocrates. However, Galen makes mention of the water bath, which he terms diplangium, diploma, vas duplex; he was acquainted with sublimation and distillation per descensum. We have stated in a previous part of this sketch that they were also acquainted with the ambix, from which at a later period was derived the word alembic. Certain utensils employed at this time differed but little from those of the present day: they used mortars, stones for pulverizing, sieves, knives, scissors, rasps, spatulæ, presses, basins, and jars of every possible form, for the preservation of the different medicines. The whole advancement of the art at this period seemed to be concentrated upon this point, that of combining in varied proportions, and with a great number of accessory remedies, agents of the most heterogenous characters, for the purpose of overwhelm-

ing, by a single blow, diseases of the most opposite nature, and even of combatting beforehand, by preventive means, morbific causes not yet come into existence.

ART. III.—*Practical Medicine.* By THEODORE S. BELL, M. D., of Louisville, Ky.

In order to compress the largest amount of practical medicine within a small compass, I propose to select such portions of recent periodical medical literature as may conduce to the end in view, and to report one or two cases of recent occurrence in Louisville.

Dumb bell Urinary Deposit.——Dr. Golding Bird, some time since, called the attention of the medical profession to a peculiar formation in urine, to which he very properly gave the name, "the dumb bell urinary deposit." Dr. Bird regarded these dumb bell deposits as zeolitic crystals of the oxalate of lime, but Dr. Frick, of Baltimore, whose work was recently reviewed in this number, in the *American Journal of the Medical Sciences*, for July, 1850, endeavored to prove that these crystals consist of uric acid. In the same excellent Journal, for April, 1851, Dr. John Bacon has published a valuable series of experiments and analyses, and inquiring physicians everywhere will endorse the following statement, made by Dr. Bacon: "The question as to their (the dumb bells') chemical composition is not only one of scientific interest, but of practical importance in its bearing on the treatment of oxaluria, an affection which is probably much more frequent than is generally supposed."

Dr. Bacon's paper is an admirable one, but the important point is his conclusion from his experiments and analyses. That very formidable and painful formation, known as the mulberry calculus, is composed of oxalate of lime, and it is important to the practitioner to know

when that lithic diathesis presents itself. Dr. Bacon regards the dumb bell crystals as "a salt of lime, containing either oxalic, oxaluric, or perhaps some other organic acid easily converted into the oxalic; but the exact nature of the acid remains to be determined by future investigation." Dr. Aldridge, of Dublin, has produced very strong proof that oxalic acid is formed from lithic acid, rather than from any other of the constituents of the urine. The experiments of Dr. Aldridge seem to establish the fact "that oxalate of lime forms in the urine, in certain states of the system, after secretion by the kidneys, and during its detention in the urinary tubes and bladder. It seems highly probable that, in some cases which have been described, the oxalate of lime has been rather formed after the urine has been secreted, than as a result of the secreting process."

Dr. Bacon's experiments with the dumb bell urinary deposit were conducted in strict conformity with the truth developed by Dr. Aldridge, as to the effect of heat in producing oxalate of lime in healthy urine, which did not yield such crystals before being boiled. There is reason to hope that the researches of Dr. Bernard, of Paris, referred to by our foreign correspondent last year, and recently developed before the Academy of the Medical Sciences, by Dr. Bernard himself, may aid practitioners in directing special medicines to the kidneys. A translation of Bernard's remarks before the Academy will be found in another part of this Journal.

On some of the remote effects of injuries of nerves.—In the same number of the *American Journal of the Medical Sciences*, from which Dr. Bacon's remarks are quoted, Dr. C. W. Parsons, of Rhode Island, publishes a valuable paper on the remote effects of injuries of the nerves. These cases often present themselves in practice, and are exceedingly difficult to manage. After a detail of a number of interesting cases, Dr. Parsons

makes the following remarks, which contain a great deal of sound, practical matter:

It would appear, from a large number of scattered facts, of which I have given only a few specimens, that wounds of nerves sometimes are followed by convulsive movements, either in the very part that is hurt—or in particular parts of the muscular system distant from the injury, particularly the muscles of respiration—or involving the whole frame. These convulsions sometimes appear while the wound remains open too long and inflames, sometimes after it has healed. They are sometimes accompanied by fits of pain, at other times not so. Irritative fever, and the various symptoms of hysteria, occur, in many cases, between the time of injury and the appearance of convulsions. The part often becomes partially paralyzed. The spasms are frequently made worse by cold and damp, and cease during sleep.

A large proportion of these various cases have been in young females, and persons said to be nervous, or hysterical. Yet some occurred in the stronger sex; and a good many of these curious observations are furnished by Baron Larrey, from the battle-ground and camp. Undoubtedly some unknown cause in the person's previous state, conspires to produce them, or they would not be so rare. Some persons have taken the trouble to try to *prove* that these effects are rare. To show this, they have laid bare and isolated the nerves in living dogs, and then pinched, pulled, cut, torn, and burnt them. It is found that injuries of nerves in inferior animals seldom produce the secondary nervous symptoms we have been describing. But this only illustrates what we all know, that the constitutional symptoms of local injury and reparation are generally less severe in these animals than in man. If such experiments are meant to prove that, in man, nerves are hurt much more frequently than remote convulsive or neuralgic affections are produced, they are at once needless and insufficient.

The wounds to which these consequences have been ascribed were most commonly punctured. After some incised and gunshot wounds, a nerve has been found to be partially divided. This would put the undivided fibres on the stretch, as may be easily shown by experi-

ment. If a nerve be first partly cut across, the fibres will retract but little; on then dividing it completely, the retraction will be immediate and very considerable. Fatal tetanus was caused in one instance by caustic, which the patient applied himself; the nerve beneath (musculo-cutaneus of the arm) was found red and softened for some inches. Foreign bodies in the substance or immediate neighborhood of nerves—as fragments of bullets, the knot of a surgeon's ligature, the end of a whip-cord, a stick thrust through a hollow tooth—have caused both the painful and convulsive paroxysms. The decayed stumps of teeth act in the same way.

Bleeding at the bend of the arm has sometimes been followed by immediate acute pain, and at a later period by habitual neuralgia or spasmodic attacks. The ill consequences of the wound of venesection most noticed have been the local inflammatory symptoms—particularly inflammation of the cellular tissue, absorbents, veins, and of the fascia connected with the biceps tendon. Some old surgeons, as Benjamin Bell, dwell a good deal on these local inflammations, and seem to confound those of different tissues together. These are all distinct from the nervous affections we are describing, though occasionally combined with them. When the wound of venesection does not heal soon, inflammation ensues in a few days. If the fibres of a nerve are involved, pain runs up the limb, with tenderness. Leeches and cooling lotions have been found to relieve such cases, which are undoubtedly inflammation of the nerve.

It is not necessary to point out the analogy between these cases and neuralgia. Those where pain was the chief symptom are merely instances of neuralgia from a probable local cause. The convulsive attacks are quite analogous to those caused by the irritation of teething, and other forms of what Marshall Hall would style eccentric convulsions. They are on some accounts good cases for study, as they throw light on those more obscure instances where the exciting cause is some previous derangement in the bodily functions instead of a visible outward injury. One other disease resembles these facts somewhat. I mean neuroma, or the painful subcutaneous tumor. We have seen that painful and convulsive turns often come on after the wound of a nerve has healed, the

scar remaining tender and painful, and appearing to be the centre from which the attacks radiate. Some cases of neuroma seem to have originated in this way. One of the most distressing on record was ascribed to the prick of an awl. These tumors are also much more frequent on exposed parts. But they do not commonly have the structure of a cicatrix. Most frequently there is a fibrous cyst of small size, containing a firm body, seated near or in the substance of a superficial nerve, and causing, as its chief symptom, intense, intermittent, radiating pain.

I have not sufficient materials to judge of the prognosis in these cases. Mr. Hamilton, of Dublin, says, after relating a number of interesting facts: "All the symptoms, uninfluenced by every remedy made use of, have gradually declined after a long interval, having apparently undergone a natural cure; but in a few instances the termination has been fatal." From the reports I have succeeded in bringing together, it appears that these affections, like many others that begin in irritation, take mainly their own course, and generally tend toward recovery, if placed under good hygienic influences. The painful paroxysms are more frequently rebellious to treatment than the convulsions.

By far the most important remedy for these affections is to cut off the communication between the wounded part and the nervous centres. The wound or cicatrix may be cut out, or destroyed by cautery; the member may be amputated; the nerve may be cut across just above the part injured, or at a distance above this spot, or a part of the nervous trunk may be laid bare and excised. These operations, if performed early, before the irritation extends far, very frequently give relief; but if delayed till the wound has healed, and secondary symptoms have come on, the result is very much less certain. Mr. Mayo, a surgeon of great experience, says that neuralgic pains, immediately succeeding a wound, may be arrested by dividing the wounded nerve above the part injured; but if they commence after the cicatrization of the wound, the chance is that the disease excited in the nerve has extended too far to be relieved by that operation. A number of cases have come under my notice where an operation has relieved pains or spasms months or years after they commenced. The relief has sometimes been

instantaneous, at other times more gradual, but in many cases was evidently procured by the operation. I have before me the account of a man who was wounded in the leg by a musket-ball, and eighteen days later, after the wound had healed, began to have some degree of paralysis, with fearful convulsions of the whole body, at intervals. About eight years after the first attack, having been subject to these tormenting paroxysms daily for the greater part of the time, he had a piece of the external popliteal nerve, about two inches in length, cut out, and in a few hours he felt a total change, was composed and tranquil, continued free from the sweatings, palpitations, startings, and shudderings he had had before, and in eight years after had only six or seven much milder attacks.* This is a remarkable instance of an irritation causing disturbance of almost all the nervous functions, and yet, after eight years' continuance, so much dependant on the local lesion as to be substantially cured by destroying the connection between the part and the nervous centres.

A lady in this city, many years ago, cut across the end of the forefinger with a sharp knife; the wound did not heal for many days, and some swelling and inflammation followed. About a fortnight after the accident, pains began, which ran up the arm to the shoulder and region of the brachial plexus. After suffering some years in this way, and trying many remedies with no good effect, under the direction of a distinguished Fellow of this Society, now deceased, she had the finger cut across on its palmar surface to the bone. Dr. John C. Warren, who operated, was very far from strongly advising it, and by no means sanguine that any permanent relief would follow. It proved so, however. The last joint of the finger remains a little crooked, the power of using it is impaired; but the pains in the arm, and pricking and tingling in the hand, soon disappeared.

Traumatic tetanus has sometimes been cured by removing the wound, or dividing a nerve that was injured. Larrey has furnished several remarkable cases of this kind; and I have just met with a similar fact in the *Dublin*

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* From Descot's *Dissertation sur les Affections Locales des Nerfs*, Paris, 1825. Quoted in Johnson's Med.-Chir. Rev., April, 1827.

Journal of Medical Science, for August, 1850; and with two reported by an Italian surgeon. In the first-named one, tetanus set in twelve days after a very severe contusion, which left exposed about three inches of the posterior tibial nerve. Next day the symptoms were increasing. Mr. Bransby Cooper then amputated the limb, and the tetanus entirely disappeared. The man died, just a fortnight after, of diffuse inflammation of the cellular tissue.

In the more chronic affections which form the principal subject of this paper, it seems to me that an operation should be advised, when milder measures do not succeed, and there is reason to suppose that an injured nerve, or wound of a part well supplied with nerves, is the cause. But, if there be no tenderness or pain in that part, and no swollen cicatrix, if the fits seem to begin from other parts of the body as well as this, there is more reason to expect harm than good from operating. Such is the recommendation of Pearson and Swan; and such would be my own conclusion, from examining a large number of recorded cases.

Since writing the above, I have seen a notice of Dieffenbach's Operative Surgery, in the *British and Foreign Medical Review*, for April, 1846, which states that this eminent practical surgeon takes "a very unfavorable view of the operation under any circumstances. One case of the author, however," it proceeds, "is interesting; very severe neuralgia had followed venesection; the injured nerve was divided, with instant effect, the pains, which had continued for a month, immediately ceasing. A similar case is quoted from Hirsch, in which convulsions and coma accompanied local neuralgia, which were removed by two deep incisions over the wound. But, whether for relief of neuralgia or tetanus, or for any other cause, success is rare; and 'surgery is here under the greatest obligation to physiology for pointing out that the sanguinary path is not the right one.'" This, I would respectfully suggest, is a question for experience, and not for physiology to answer.

The modes of cutting off connection between the injured part and nervous centres, will differ in different cases. Mere incision carried across the nerve succeeds sometimes, though the affection may be expected to return in a few weeks. We have just mentioned a case

where the relief was permanent. Excision of a piece of nerve sometimes gives only temporary ease. In a boy, near Boston, many years ago, "a portion" of the anterior tibial nerve was cut out, for a most distressing neuralgia caused by injury; how large a portion, I cannot tell; the pains returned some months after. It is impossible to say in a general way how large the interval between the divided ends must be to prevent their reuniting. Ollivier states it at about one inch; but it will of course vary with circumstances.

Decidedly the best results have been obtained by cauterization, which most thoroughly prevents the nervous fibres from reuniting. Larrey employed the hot iron, at a white heat, in many cases of tetanus coming on soon after injury, and with good success. I have before related one remarkable cure of a chronic convulsive affection by the actual cautery.

Benjamin Bell proposed that, in cases of spasm following soon after venesection, the soft parts be very freely and extensively divided down to the bone. His advice, I suspect, has seldom been followed, in a part like the bend in the elbow, where the nerve wounded is usually subcutaneous, while there are large nerves and arteries beneath.

Compression, as by the tourniquet, has sometimes proved very useful as a palliative, actually preventing paroxysms which seemed just coming on. The machines for making more exact pressure on nerves, which were contrived to prevent pain in surgical operations before the days of ether, might be introduced again for the present purpose. The bearing of these facts on the question of a nervous fluid is worth noticing.

The only cases where I have known leeches to be useful are those before alluded to, where a wound remains open, inflames, and is then followed by pain up the limb. In some such cases, the local antiphlogistic course has acted like a charm. Rest is of the highest importance in these instances; motion of the part tending to prevent the wound from healing, and to provoke inflammation. The choice between cooling lotions and warm fomentations must be determined by trial. I should also be induced to follow this local antiphlogistic course, when-

ever there was tenderness of the cicatrix and up along the course of the nerves.

In one case of long standing, Dr. John C. Warren advises steady, continual dropping of warm water. Rubefacients, as in ordinary neuralgia, are often useful, but by no means reliable. The older surgeons made great use of oily and balsamic applications. We find so sensible a practitioner as Ambrose Paré applying basilicon to a puncture of venesection, followed by acute pain, *for fear the wound should unite*, and afterwards using oil of turpentine, with rectified brandy, and if these should not suffice, proposing to apply boiling oil.

Of other treatment I have very little to say. It should be conducted on the same principles as that of similar affections, neuralgia or spasms, with no known local cause. I suppose the most important points are, to get the patient to breathe as much fresh air as possible, to direct good and nutritious diet, to prevent excitement or fatigues of the mind, to encourage and soothe, without a parade of sympathy, to obviate any functional disturbances, particularly menstrual, and to give tonics as they can be borne, with anodynes only as they are absolutely required. General cold bathing I have known very useful in one severe case in this city. Mercury has sometimes allayed tne local inflammatory symptoms, but no more.

The only point of general treatment on which I could have hoped to say anything new is the use of ether, or chloroform. In the one case I have reported at length, chloroform completely quieted the spasms, but only for the time. Natural sleep also prevented their return. I have not known a single case of neuralgia, distinctly traceable to injury, which was benefitted more than temporarily by these agents. But in other cases of this affection they have often been useful, not only by procuring an interval of ease, but by putting a stop to the paroxysm. I have more than once seen severe tic douloureux pass off under the influence of chloroform inhaled, and then keep off. Its external use seems to me particularly worth following up. Though not so certain as some remedies, it sometimes acts with surprising quickness and completeness. The union of morphia with it, as practised by the late Dr. J. D. Fisher, increases the probability of per-

manent good. I have lately known a solution of sulph. morph. gr. x, in chloroform ℥j, as recommended by him, rubbed and laid on the part, to relieve immediately and perfectly severe shooting pains up the arm, connected with an irritable ulcer on the finger.* The inhalation of ether in tetanus was tried with sanguine hopes. It has sometimes relieved the spams and appeared to save life, at other times it has increased them. Its influence on those healthy muscular contractions, like the uterine efforts which depend on the spinal cord as their ganglionic centre, is not uniform; and the causes of this variety are ill understood. These agents have but just begun to show their powers, and experience is as yet various and contradictory on many points, which will at some future time be cleared up. Certainly, however, a mode of treatment which has succeeded in some dozen or score of well reported cases of tetanus in three or four years fairly deserves to be tried.

This subject is one of scientific, quite as much as practical interest. Yet, though some of us may never meet with facts exactly similar to those we have been considering, it is well for us to be reminded of the rarer forms that disease assumes. The mode in which the system reacts against disturbing causes varies so much in different constitutions, as to make an inexhaustible subject for study. A little puncture, or sudden excitement of feeling, aided by some peculiar impressibility which, perhaps, never showed itself before, may produce speedy death. On the other hand, men have recovered after having the thorax skewered by the shaft of a chaise, or a tamping-iron shot through their brains. The remembrance of such facts will keep us from too great confidence in prognosis—an error which is as easily perceived, and perhaps does a physician as much harm, as any mistake in the actual management of a case.

Buttons in the Intestines producing Symptoms of Obstruction.—Dr. Homans reports the following interesting case:

* M. Deverge recommends frictions with an ointment chiefly composed of chloroform four parts, to thirty parts of lard. He mentions a case of facial neuralgia permanently cured apparently by inhalation of chloroform.

A male child, aged 14 months, on the 23d of October seemed quite unwell, after passing an uneasy night. There was strong effort at expulsion of matters from the bowels. Under these straining attempts, some feces passed, without relief of symptoms; pulse accelerated; skin hot; tossing of head, etc.; slight vomiting also occurred; suspicion of intussusception arose. In the night, the above symptoms having been on the increase for twenty-four hours, a teaspoonful of castor oil was given. Through the night severe pain of paroxysmal nature; the intervals marked by perfect ease; the pain being compared by the mother to uterine efforts in parturition. On the following day the child was much more ill and feverish, and Dr. H. saw it at nine o'clock, A. M.; tenesmus urgent; patient moaning; skin hot; pulse full and quick; a slight discharge of bloody water from the bowels. On palpation of abdomen a hard swelling was detected, about half way between umbilicus and crest of right ilium, of the size of a pullet's egg. On examination by the rectum, a hard mass was discovered, somewhat yielding to pressure by the finger. A large enema was given from a powerful syringe, which was unsuccessful; the fluid being returned before overcoming the obstruction. A second injection was given; in a short time an explosive sound (internal) immediately preceded the discharge of a large lump of solid feces, pushing before it a small *button;* several dejections followed in quick succession, composed of solid and fluid matters, among which were passed *seven buttons*, made from horn, porcelain, and metal, and varying in size from those used for pantaloons to the ordinary shirt button. The child was soon relieved, and has been well since. Nothing had passed from the bowels for forty-eight hours previously to the attack.

Dr. Homans remarked that the case was important, as illustrating the necessity of accurate diagnosis; several of the distinctive features of intussusception and hernia being present, viz., the discharge of bloody fluid, and the tossing of the head so often noticed in intussusception; while the coldness of the external surface, frequently remarked therein, did not exist in this case. There was slight vomiting at first, and likewise the inability of passing feces, even with violent effort, which might have led

to a suspicion of hernia. The detection of a tumor by the finger suggested the use of an enema, as affording a chance for the removal of any foreign body obstructing the intestine.

Hot Water in Sprains.—Dr. Samuel Jackson, formerly of Northumberland, has written a valuable paper, for the *American Journal of the Medical Sciences*, on the use of hot water in sprains. This agent must be regarded, by all who have observed its effects, as a very important remedial power, not only in sprains, but in a great variety of inflammations. Dr. Gordon, of Tennessee, published two lectures last year, in this *Journal*, on the uses of hot water in a variety of diseases, and his statements attracted a great deal of attention. I have seen intense pains of the head relieved in a short time, by the steady application of hot water, and I often rely upon it exclusively.

The paper of Dr. Jackson, on the treatment of sprains with hot water, is a valuable contribution to practical medicine. There are cases that cannot bear the bandage, when the physician first sees them, and such cases will find great relief from the hot water, used as Dr. Jackson recommends it. He details a variety of cases, all clearly establishing the admirable effects of the remedy. Dr. Jackson's peculiar views of inflammation led him to think that the hot water is not useful, if inflammation has had time to form, but I should entertain no fear on that account. The forming stages of a paronychia, and of many kindred affections, are inflammatory from the very outset, yet I know of no remedy which as certainly, speedily, and effectually disperses a paronychia in its early stage, as hot water. The effect of a long soaking of the hands in hot water is strikingly manifested in the hands of washerwomen. The shriveled condition of the fingers shows that the vessels must feel a pressure almost equal to that produced by the bandage, and it would be difficult to conceive how much increased action of the vessels of

the part, or dilatation of them, could take place in such circumstances.

Dr. Jackson recommends that the sprained part be immersed in hot water, and retained there an hour or two; as the water cools, portions of it are to be removed, and hot water added. After the part becomes easy, it is taken from the water, elevated, and cloths dipped in cold water are to be applied, for several days if necessary. Will Dr. Jackson bear with me, while I suggest that he will find the proper application of the wet bandage a great improvement upon the use of the loose cloths? When, for example, the foot is taken from the hot water, and elevated, the bandage is of all remedies the most eligible, and by far the most efficacious. Refrigeration can be carried on with the bandage, and inflammation can by no possible chance supervene upon the use of the roller, properly adjusted.

The following suggestions of Dr. Jackson are useful:

In nearly all cases of external violence which do not implicate any of the viscera, the immediate use of hot water is, as I sincerely believe, the best as it is the surest cure and preventive of pain. If you are about to have a tooth extracted, hold hot water in your mouth both before and after the operation: if you must have a felon lanced, hold the hand in hot water for a long time both before and after the cutting. My first case of what is vulgarly called "inverted toe nail" occurred to me after the patient had thoroughly relaxed the part by warm poulticing for many days, and I did not proceed to the operation of splitting the nail and eradicating the offending portion, till he had bathed his foot a long time in hot water. I had been taught in Dorsey's Surgery that it was a most painful operation, and I was therefore surprised, notwithstanding my hopes from the relaxation, to find the young man making very little complaint. I have several times performed this operation, and owing, as I believe, to the hot bathing, I have not found it severe in a single case.

Now, if I am not mistaken, some reader will here exclaim, that even in inflammation, warm water agrees with

some persons and cold with others. This fact, however, I learned when a student from S. Cooper's prize essay on "Diseases of the Joints:" but however true this may be, I have not found a single case of bruise or strain in which hot water, when used in time, was not a great present comfort and permanent benefit.

When can I use the limb, is the continued cry of the patient and the continual anxiety of the harrassed doctor. Some men have been known to walk off the inflammation as others have been known to walk off the gout, but this is a very dangerous experiment. I once sprained my metatarsus, but as the pain was not intolerable, I rode abroad without any application; on my return, I went to bed with the remittent fever, and the pain was soon gone and forgotten. When I came to use the limb, after two weeks, it became painful; but as the bilious fever prevailed greatly, I had no time to think of self, and nothing was done unless some rubbing with liniment. When the cold weather set in, the pain subsided gradually; but the warm weather of spring brought it back with distressing debility in the part. Thus going in the fall and coming in the summer, this infirmity continued to trouble me for four years. My limb was weak and painful every summer but not so bad as to send me to bed for a cure. I have seen many people triumph over the poor doctor by limping over the earth in great pain till nature cured the disease; but such wayward spirits always pay dearly for their folly, and they are sometimes finally brought to a bed of repentance.

Double Ovarian Dropsy.—Professor E. R. Peaslee reports, in the *American Journal of the Medical Sciences*, the successful removal, by the large peritoneal section, of both ovaries, in a case of double ovarian dropsy. The case is one of much interest, and the following are the conclusions of Dr. Peaslee, from the details of his case:

I. So far as the writer is aware, Miss G——'s case is *unique*, so far as the successful removal of both ovaries at the same time by the large peritoneal section is concerned. It is also scarcely less singular, for the very slight disturbance of any kind from the operation. The *pulse*

never rose above 120; never above 115 after the first twenty-four hours had elapsed, except for a few minutes on Sunday night. From Monday morning to Tuesday morning, it ranged between 93 and 114; Tuesday to Wednesday morning, between 86 and 112; Wednesday to *Friday* morning, between 88 and 104; Friday to Saturday morning, 83 and 100. It never rose subsequently above 97, and averaged 90—about her natural pulse. The *respiration* was 26 for half an hour when reaction was first established, and uniformly 23 or 24 during the first three days; it then continued at 22, till the pulse fell to 90, and then became 20. The *reaction* also was perfect in less than five hours, and was never excessive. Indeed, the patient may almost be said to have recovered without a single bad symptom; at least without any severe symptoms peculiar to such an operation, or which might not have occurred to one of her delicacy of constitution, from even a slight cause. Hence the *medicinal* part of the after-treatment was decidedly expectant. The suppuration could not have amounted to more than ℥iss in all, during recovery.

II. The almost unfailing aid, in the diagnosis of ovarian diseases, which is afforded by the present advanced state of pathologico-anatomical and surgical science, as compared with the obscurity resting over this subject till very recently, is worthy of remark. It is, however, impossible to form any rational conclusion as to the adhesions or non-adhesions of a sac thus filling the abdomen, without previously evacuating it by tapping. Even then adhesions may exist without being detected. The "friction feeling" is more distinctive than any other sign short of evident immobility of the sac; and was, I think, detected in this case on the first examination after (and in less than thirty-six hours after) the adhesions had formed.

The reason assigned for the absence, on the second examination, of the solid tumor felt per vaginam et per rectum eleven days before, proved to be correct. The fluctuation perceived from these passages at the first examination was produced by the fluid in the large sac, which, being less distended at the second, did not fall so low as to be reached. Thus the inferences from the positive signs at first were rightly regarded as being confirm-

ed by their absence afterwards, the circumstances having changed.

III. The temperature and hygrometric state of the air in the room at the time of the operation are very important matters. Certainly, the peritoneal surface is *more nearly* in its natural condition when exposed to a *warm and damp* atmosphere, than if the latter be cool or dry, or both. A still higher temperature than 80° would probably be better for the serous membrane; but it could not long be tolerated by the lungs either of the patient or the operator. It was observed that the surface longest exposed became somewhat livid from incipient congestion; and, had even a less protracted exposure to a dry or a cool atmosphere occurred, I doubt not this effect would have been still more marked, and a decided congestion, which is but a single step from inflammation—from peritonitis—might have occurred. Moreover, a sudden change of temperature, even though a slight one, *after* the operation, and whether general or local, is replete with danger. Hence the temperature was kept at 78° to 80°, till all danger of inflammation had disappeared; and the warm water dressing was kept constantly upon the abdomen, as long as any dressing was needed.

That the alimentary canal be also empty and collapsed at the time of the operation, is an important consideration; since thus protrusions are avoided, or easily reduced if they occur. Hence the propriety of a dose of oil thirty-six hours before the operation, and fluid nutriment afterwards.

IV. Several difficulties I have not seen adverted to, in reports of this operation, occurred. 1st. The skin, being very tense, retracted about 3 inches when divided, and also drew the next layer (one and a quarter inch thick, as before stated), as it was divided, down to an almost level surface, and thus rendered it impossible to keep the precise position of the middle line in the eye, through the whole length of the incision—nine inches. 2d. The fascia transversalis and parietal peritoneum were so atrophied by pressure as not to be recognized as distinct layers either during or after the operation, instead of being thickened as usual. 3d. Violent efforts to vomit, *i. e.*, spasmodic action of the abdominal muscles, have been not unfrequent in other cases, and may not, therefore, in this, have

been occasioned by the anæsthetic. 4th. The thickness of the abdominal walls (one and a quarter to one and a half inch) produced much difficulty in coaptating the edges of the incision. Large needles, two and three quarter inches long, were required; they must also be curved, and therefore annealed; and thus their points were spoiled. Still the latter must be carried through the walls obliquely, so as to pass between the abdominal aponeurosis and the peritoneum, while, at the same time, the former was hardly thicker than stout letter paper, and the latter not certainly recognizable at all. Still the risk of peritonitis was not partially enhanced by the delays thus produced; since they occurred either while the sac still protected the peritoneum, or while the wound was being closed.

V. The appearance of the catamenial discharge,* seventy-two hours after both ovaries had been removed, and its continuance for three days, appears at first sight to contradict the idea, now generally entertained by physiologists, that these organs originate the *nisus* which thus manifests itself. I should, however, consider the discharge, under such circumstances, as a mere uterine hemorrhage, resulting from the congestion of that organ produced by the operation; and as, therefore, being a most salutary phenomenon, and a highly favorable symptom. A patient on whom I operated, three years since, for an extensive laceration of the perineum, had a similar phenomenon occur on the third day afterwards, which also continued three days, and prevented the complete success of the operation. In that case, also, I think the exciting cause of the hemorrhage was of the same general character; the preceding regular period having ceased a week before the operation. I shall expect to learn that the theory above alluded to is confirmed by the future history of the present case.

The fact that the urine became free (℥viii every six hours) within forty hours after the operation, and continued so uniformly afterwards, was regarded as highly favorable at the time; and this, together with the fact that, at the end of eighty-five hours, she evacuated the bladder without instrumental assistance, was thought to

* Its last regular appearance had been ten days before.

be inconsistent with the idea that peritonitis was then impending.

VI. The pain complained of October 5th was probably produced by the patient's leaning upon her elbow in bed; and that in the right iliac region, which occurred on the 10th, and continued four days, I should attribute to her efforts, as she sat up longer each day, and to the pressure on the uterus, and perhaps also on the ligatures directly of the small intestines, while thus erect in bed. A somewhat constipated state of the bowels is another element in the causation perhaps worthy of notice.

The violent attack of pain on the 19th of November may or may not have been excited by the removal of the last ligature that morning. I incline to the opinion that it *was* thus excited, though no undue force was applied to the ligature, and it is improbable that the peritoneum was at all implicated. It appeared to me possible that some, at least, of the ligatures were adherent to the abdominal walls alone, at my last visit, five weeks before (October 16th). But, in regard to the two ligatures first brought away, this opinion is shown not to hold, since they were both *untied* before they left the pedicle. The last ligature, however, *slipped off*, as was shown by the loop still remaining whole; and, therefore, might have been retained by granulations in the abdominal walls for days previous to its detachment. I judge this was the fact, and that a nerve being also implicated in its detachment accounts for both the superficial character of the pain and the rapid culmination of the attack. I am, however, by no means tenacious of this explanation.

But what became of the fourth ligature, of which no account is rendered by the patient? I doubt not that it was removed together with one of the larger ones. In all four of the ligatures, there were sixteen threads of silk. The last included two of these; and I doubt not one of the preceding was made up of eight threads, and the other of six. Two ligatures, thus removed together, would of course lie side by side when drawn out, however distant their internal extremities may have been before; and the patient could not be expected to remember to count the threads as they were removed. I shall doubtless request the next patient to preserve them for subsequent inspection.

VII. The pedicles were divided thus, |⌣o-|: the *oblique* lines representing the cut edge, the circle (o) the puncture made by the needle, and the dotted line the level of the ligatures—in order that the loops might *slip off* on applying traction at the proper time, and thus the ligatures be the sooner detached. It appears, however, that only one of them became detached in that way, the rest having been previously *untied*. The one that *slipped*, also, was the last to come away; but the supposition has already been hazarded that it may have left the pedicle, and probably did, some days at least before it was detached. Whether, therefore, my idea as to dividing the pedicle will prove of any practical value, still remains to be decided. And whether the loop usually slips off, or cuts out, or becomes untied, after this operation, is a question previous reports do not enable me to decide, and which I now have under investigation.

VIII. The success of the operation I attribute to the fortitude and confidence of the patient; the comparatively slight adhesions of the diseased mass; the temperature, &c., of the room at the time and subsequently; accurate coaptation of the divided abdominal walls; and the judicious after-treatment of Dr. Jarvis, seconded by the faithful attentions of the three young gentlemen before named. I am positive that as much care and skill are necessary in closing the incision properly, as in performing the preceding operation.

Whether the operation of ovariotomy is ever justifiable, is a question which would certainly be out of place here. It is the writer's opinion that, if the patient's general health is rapidly failing (but not already too far prostrated), and the tumor is found to be not extensively adherent, so far as all the known methods, taken *together*, can decide that question, the operation *is* justifiable; *provided* the patient, after fully understanding its nature, strongly desires to have it performed, and has strong hopes of recovery therefrom. But it is an operation never to be urged, nor to be undertaken by an operator whose care does not include the minutest particulars, both prior and subsequent to its performance, which can affect its results.

Dr. Peaslee states that the *aunt* of his patient was the first person on whom the operation of ovariotomy was

performed, in this country, and that it was performed in 1820, by Dr. Nathan Smith, of Dartmouth College.

Dr. Peaslee is laboring under a singular error in this matter, and as we cannot believe that he would willingly do injustice to the equitable claim of a Kentucky surgeon, we purpose to present him proof of his error. Kentucky is entitled to no small renown in Surgery. A Kentucky surgeon, Dr. Walter Brashear, a gentleman well known to the writer, was the first one who amputated at the hip joint. His operation was successfully performed in 1806, eight years in advance of Dr. Mott, yet the latter claims all the honor due to the original in this operation. A Kentucky surgeon was the first one that "exsected the clavicle for osteo-sarcomo." Dr. Charles McCreary, of Hartford, Kentucky, successfully performed the operation, on the 4th day of May, 1811. Seveteen years afterwards Dr. Mott performed the operation, and claimed that he was the first in that enterprise of surgery. He calls it *his* Waterloo operation, and says he claims the credit of it, "for his country, his city, and himself." We claim, and truthfully too, the credit of the operation for "our country, for Kentucky, and for Dr. Charles M'Creary." The method of Dr. M'Creary's operation was almost similar to the one adopted seventeen years afterwards by Dr. Mott. And when it is remembered that Dr. Mott was a follower of Dr. M'Creary in this operation, and the vast superiority he possessed in the appliances for the Waterloo operation, over those in the hands of his Kentucky predecessor, Dr. M'Creary's reputation must be considerably enhanced.

A Kentucky surgeon was the first to perform the operation of ovariotomy. Dr. Ephraim McDowell, of Danville, Kentucky, performed the operation the first time it ever was done, in 1809, eleven years before Dr. Nathan Smith's operation on the aunt of Dr. Peaslee's patient. The tumor, removed by Dr. McDowell, weighed fifteen

pounds, and by the thirty-fifth day after the operation, the patient was well. Dr. McDowell performed the operation of ovariotomy, a number of times, with signal success. Dr. Lizars, of Edinburgh, sixteen years afterwards, set up a claim to originality in the operation, but that he did it in full knowledge that he was doing injustice to the merits of Dr. McDowell, is evident from one fact not generally known. Dr. McDowell was a pupil of the celebrated Edinburgh surgeon—John Bell. He did not attempt to make a noise in his own country, over his successful enterprise, but contented himself with writing out a history of his cases, and transmitted it to his preceptor, John Bell. Upon the death of that distinguished surgeon, his papers passed into the hands of Mr. Lizars, and from Dr. McDowell's cases, he first learned that ovariotomy could be successfully performed. When he published his own success, he took good care to avoid all reference to the distinguished Kentucky surgeon.

It is to be hoped that Dr. Peaslee will correct the error that has gone forth in the *American Medical Journal*, under his authority, and render justice to the signal merits of Dr. Ephraim McDowell, of Danville, Kentucky. I referred to this subject in the February number of this *Journal*, for 1850, and regret that any necessity has again arisen for the vindication of the proper claims of Kentucky Surgery.

Glycerine.—I have seen so many gratifying evidences of the value of glycerine for certain forms of aural derangement, that I take much pleasure in making an abstract from a recent lecture on the subject, delivered by Thomas H. Wakley, surgeon to the London Free Hospital.

Mr. Wakley very correctly remarks, "an accurate diagnosis is half the cure." It is very essential in the proper use of glycerine, as all will find, who undertake to use the remedy. There are forms of deafness that derive

no kind of benefit from the use of glycerine, while there are other kinds that are promptly relieved. An ear speculm, with a good reflector is essential to the proper management, not only of these cases, but of many others. A few days since a man came to me, complaining of having a splinter in his ear. I examined the ear as carefully as I could, with a strong light, but was unable to find the object of my search. But upon applying the speculum, I found the splinter, and was able to seize it with a pair of very small forceps, as easily as if it had been lying on the surface. Now if the speculum was essential to the finding of a splinter in the ear, should not its aid be constantly appealed to in explorations of the delicate organism of that body?

Mr. Wakley speaks to the point in the following remarks:

A new remedy is sure to be exposed to the misfortune of being recommended in cases that are not suitable for its adoption: from this cause, an important agent often falls into disrepute, and even disuse. In the treatment of deafness, failures of new remedies are the more likely to happen, as aural maladies find no favor with the majority of the profession. Many empirics owe all their success and ill-acquired wealth to this cause.

The introduction of glycerine into the treatment of ear-diseases has produced some slight change in practice; and many cases, which not long since fell to the lot of the "aurists," are now in the hands of regular practitioners, greatly to the advantage and safety of the sufferers. The examination of the ears by competent practitioners has led to the discovery of diseases unsuited for the use of glycerine, but having fallen under the notice of competent surgeons, unexpected relief has been afforded to many desponding patients. Why, it may be asked, should the surgeon abandon any class of diseases, and thus invite the charlatan to enter a field of practice which legitimately belongs to the profession? The impropriety of so doing cannot be doubted. It is improper, because it is injurious to the professional character; and it is unwise,

because it encourages ignorance, at the expense of a too credulous public.

Soon after my first publication, many unsuccessful cases of the employment of glycerine in deafness were reported to me. This was to be expected. Failures were sure to take place, from a variety of causes; the two most frequent being, the inaptitude of the cases chosen for the employment of glycerine, and the impurity of the drug used. Several samples of glycerine were sent to me for examination. In only one instance was the specific gravity correct, and in several the fluid contained an admixture of lead and oil; such glycerine as this must always prove injurious. Sometimes it may, when thus impure, prove highly irritating, and instances of this kind have been mentioned to me by both London and country practitioners. If there exist oily particles in the glycerine, they become rancid, and the whole fluid is speedily vitiated; in this state it cannot be used with safety. I feel confident that the impurity of the article has been a frequent cause of failure. In other instances, the glycerine has not been used with sufficient diligence, nor for the requisite length of time. Structures that are almost disorganized cannot be restored to a normal state in a day.

Again, he says:

In making this investigation and inquiry, the *history* of the malady cannot be too attentively considered. Did the defective hearing first occur after an eruptive fever?—an abscess in the face, or fauces?—a fall?—a blow?—a fit? Was there a discharge from the ear in the first instance?—if so, what was the character of the discharge? Did any sequestra escape? The *form* of the ear should be carefully examined, and the auditory canal and membrana tympani inspected by means of instruments especially constructed for the purpose. A silver speculum should be used, through which are reflected the rays of the sun, or of a very strong artificial light. By these means we are enabled to examine carefully the auditory cul-de-sac, and especially the membrana tympani. The quantity and condition of the cerumen should be ascertained. If a stethoscope be placed over the external ear, and the patient be directed to close his mouth and nostrils, and then

forcibly expel the air from his lungs, it will readily be discovered whether the Eustachian tube be open or not.

If the drum be entire, the air will be heard to strike forcibly against it. On the other hand, if the drum be perforated, the escape of air through the auditory passage will truly indicate the condition of the parts. All these points are entitled to attention; some of them, however, as you will soon discover in practice, are of much more importance than others. Catheterism of the Eustachian tube should not be practiced on slight grounds. When a necessity for the operation exists, of course it should be performed, but not otherwise. In unpracticed hands the operation may be productive, not only of annoyance, but of some mischief.

If the surface of the auditory canal be hard and inelastic, shining, and of a whitish appearance: if the natural secretion be wanting, and the membrana tympani be not painful to the touch, the glycerine may be employed with a tolerable certainty of success, even if a partial deafness has been of many years' duration. An uneven appearance of the external membrane of the drum is an unfavorable sign, as in some instances it may be caused by displacement of the bones of the delicate aural structure. When, besides the sense of hearing, the other senses are deficient of action, the employment of glycerine alone offers no hope of success. In such cases the utmost possible attention should be paid to the general health of the patient, with a view to restore the activity of the nervous system. The existence of paralysis in any part, unless from a traumatic cause, is an adverse indication with respect to the use of glycerine. The modes of applying the remedy vary according to the state of the parts, and the effects sought to be produced. When the surface of the aural canal is dry and shining, the ears are to be carefully cleansed by means of cotton held within the blades of a pair of forceps, and moistened with warm water. The canal is then to be rubbed with dry cotton, held in a like manner. Next the glycerine is to be applied by the same means, the cotton well soaked in it, having been repeatedly passed backwards and forwards in the external meatus, care being taken to diffuse it over the surface of the tympanum.

These are very important and valuable practical views. They deserve the serious consideration of the practitioner.

In Cases of deafness, depending upon impacted wax, Mr. Wakley advises the following prudent course:

In other cases, where the ears are plugged with hardened, impacted wax, and where the membrana tympani is only coated with vitiated wax, the glycerine must be dropped into the ear three or four times during the day. In twenty-four hours the hardened mass will generally become sufficiently softened for removal—a little operation which requires some caution. If force be used, a portion of the delicate membrane of the drum may be torn away, and unpleasant consequences ensue. The mass will generally separate without force of any kind, if the means recommended be carefully followed, gentle syringing will also promote the separation. A pellet of fine sheep's wool, moistened with glycerine, should be placed in the meatus, in order that the newly exposed surface may be brought under the direct operation of the remedial agent. The pellet also would be of use in protecting the parts from the effects of cold and the sudden influence of the air. The removal of an impacted mass of exsiccated cerumen without these precautions may produce more deafness than the presence of the offending substance.

In order to retain the glycerine for this purpose in the ear, Mr. Wakley recommends that the external meatus be plugged with wax. Another method commended for these cases is the use of a pellet of sheep's wool soaked in the fluid, and pushed gently into the meatus until it rests against the drum. The plug of wool should be the size of the aural-cul-de-sac. The beeswax plug must be used in this case, for the purpose of preventing access of atmospheric air, and the exit of the glycerine. The plan here described must be repeated every morning, the meatus being carefully cleansed each time with warm water, and made dry by passing backwards and forwards a small piece of dry cotton—this will make a clean surface

for the action of the glycerine. This plan is useful, too, in cases of epithelial thickening. Mr. Wakley says:

Glycerine is particularly useful in deafness following eruptive or other fevers; also in deafness arising from thickening of the drum, caused by an epithelial deposit. In the last-noticed condition, glycerine separates the epithelial excrescence, and thus restores the membrane to its natural state and appearance. Sir Astley Cooper, who at an early period of his brilliant professional career devoted much attention to the diseases of the ear, used *nitrate of silver* for effecting a separation of the cellular formations in these cases. But the glycerine, perfectly innocuous, is a more effectual, and at the same time a safe remedy. When the drum is perforated, the glycerine must be only applied to the walls of the meatus, care being taken not to use a sufficient quantity to admit of its being introduced or forced into the tympanic cavity. Should such an accident occur, tepid water ought to be immediately syringed into the ear, and the operation repeated three or four times. In this way the glycerine would be quickly removed.

The caution thus given on the subject of an opening in the drum of the ear, shows very strongly the necessity of the ear speculum. The practitioner of medicine cannot fail to profit by the precepts of the lecture, of which this is an abstract.

Case of poisoning by Sulphuretted Hydrogen Gas.—On Tuesday, the 22nd of April, Mr. Hugh Ferguson, an old and highly respected citizen of Louisville, and a German laborer in his employment were severely poisoned with sulphuretted hydrogen gas, and as the subject is one of some interest, both in the deadly character of the poisonous agent, and the infrequency of poisoning from it, I purpose to give the details of Mr. Ferguson's case, the one in which I was employed.

On the 22nd of April, the German laborer referred to above had finished a pit alongside of an old privy pit, and

his object was to empty the old pit, into the new one. He had made two scaffolds in the pit, one about eight feet from the ground, the other about three feet. After tapping the wall of the old pit, the laborer threw into it twelve buckets of water, in order to increase the fluidity of the mass, so as to make it run easily. This, however, increased the pressure, and forced out the sulphuretted hydrogen gas. About six o'clock, Messrs. Ferguson and Atkinson being present, the laborer descended to the lower platform in the new pit, in order to be sure that his work was accomplished. Soon after reaching the platform, he was so overpowered by the deadly gas, that he sank upon the platform, without being able to make any outcry. Mr. Ferguson thought the man had fainted, and remarked that he was too old and feeble to go down into the pit, but added, that he could not see the poor fellow in that situation without giving him assistance. He accordingly descended, unsuspicious of the noxious agent he was about to meet. Mr. Atkinson also partially descended the ladder, but Mr. Ferguson turned deadly sick, and attempted to get back to the ladder. Mr. Atkinson reached out his hand to assist him, but the overpowering gas had performed its work too effectually, and Mr. Ferguson fell, and drew Mr. Atkinson into the pit. The latter had presence of mind enough to hold his breath, managed to climb the ladder, and was thus able to give the alarm. If Mr. Atkinson had not escaped, all three of the victims must have died, because their condition would have been unknown, probably for hours.

As soon as assistance reached the place, water was freely thrown down into the pit, under the vain and fallacious hope, I suppose, that it might exert an influence on this occasion, on sulphuretted hydrogen gas, which no one ever knew it to exert on any former occasion. Water has no power of destruction over this gas, and its use on this occasion was a serious evil—it aided in disengaging more

gas, by its pressure—it buoyed up the gas, and thoroughly chilled the two victims, from whose surfaces nearly all the blood had already retreated. What can more effectually show the value of sanitary studies, than this case? In London and Paris, where science guides all these matters, sulphuretted hydrogen gas is destroyed by fire. If a few pans of fire had been let down into this pit, the noxious gas would have been burned out in a few minutes, and the poisoned men would have had atmospheric air to breathe, by which they would soon have been rescuscitated.

No one could venture down into the pit, a fact which shows the folly of the torrents of water that were slushed upon the dying men. Ropes were procured from a neighboring pump-maker, and after a great loss of time, the two men were caught by the hooks, and drawn up to the ground apparently dead.

I reached the place soon after the sufferers were drawn out: I found the case in the hands of Dr. Lyle, and joined him in the treatment. The case presented a group of symptoms, in which I saw no gleam of hope. The entire surface of the body was cold, and apparently dead—the breathing, if the spasmodic attempts after air, that were made by the sufferer can properly be called breathing, seemed to carry no air to the lungs. Mustard had been applied, but it produced no effect, and ammonia to the nose gave no sign of its presence. It would be difficnlt to exaggerate the gravity of the symptoms. The skin was universally cold, as cold as death itself could make it; the spasmodic attempts to get air, already described; a pulse sometimes manifesting itself in a feeble flutter, and at other times altogether absent, and this state of things persisted in fully for three hours, and to a considerable extent for six hours, constituted one of the most serious forms of imminent danger I have ever seen.

Immediately after the men were drawn from the pit,

they were taken to a porch in the street, for the purpose of giving them fresh air. When I reached the patient, an immense crowd was in the street, and porch, and all over the steps of the latter, and it was difficult to secure the sufferers a supply of air. The mustard which had been applied to the skin, produced no effect, and we determined to remove our patient to a neighboring house. Numbers of persons in the vicinity offered their houses, and all that might be needed for the use of the sufferers, and the contest seemed to be who should have both the victims. We conveyed Mr. Ferguson to the house of Mr. Atkinson, and the German was taken to the opposite house—Jas. I Lemon's

The most urgent demand in Mr. Ferguson's case was the removal of his wet clothes, in order to have the benefit of a warm dry bed, and after that was secured, all our means were directed to the relief of the asphyxia.—Spasms now supervened, and were very severe for some time. We depended on external applications of heat, mustard sinapisms, Granville's lotion to the back, and injections, per rectum, of brandy, and in one of them, we used a tea spoonful of chloroform in combination with the brandy. About this time Dr. Lewis Rogers joined Dr. Lyle and myself in the case.

From the first of the case, I was apprehensive of apoplexy, and as the patient emerged from the asphyxia, a stertorous breathing, a more profound coma than there should have been when the asphyxia was passing off, the condition of the pupils, and rigidity of the muscles of the jaw, all indicated that our worst apprehensions were about to be realised. But we were prepared, and the approaching danger was promptly, and as vigorously met, as the circumstances of the patient would warrant. Nothing was done at hap-hazard, and we patiently bided our time. As the reaction began, cold applications were made to the head; when these failed, we resorted to leeches, and when

they failed in doing all we hoped for from their use, we administered three drops of Croton oil, applied blisters to the ancles, wrists and back, and finally opened a vein in the arm, and drew off a quantity of the blackest blood I ever saw.

Between 1 and 2 o'clock, A. M., we retired from the house, determining among ourselves, that we could wait several hours for the effect of the active treatment our patient had undergone. The arrangement was that I should return to the case at 4 o'clock. I slept two hours, and then visited the patient again, and found our most sanguine hopes realized. The breathing was calm, the pulse full and well sustained, the extremities warm, and while I was in the room the patient spake for the first time. The apoplectic symptoms were entirely gone; the croton oil acted well, the blisters drew admirably, and in the course of the morning a distressing stranguary manifested itself, but it was relieved by sprinkling powdered camphor on one of the blisters, and by the use of demulcent drinks. We enjoined rest, and in the afternoon, the patient was removed to the house of one of his daughters.

Throughout the asphyxia I noticed that the left side was much more lifeless than the right, and the blisters on the right ancle and wrist proved to be much sorer and deeper than those of the left ancle and wrist.

These are the main features of this interesting case. From the point where I drop the details there was no occurrence that demands any special notice. The patient rapidly recovered, and on Friday was able to walk about. As in cases of concussion of the brain, in this there is a complete obliteration of all memory of the matters immediately preceding the disaster. Mr. Ferguson is unable to remember that he was about the pit, and can recollect nothing of the descent and fall of the German laborer. But in all other respects his mind and his memory are as perfect as ever they were.

This case is important as a caution to others who may have anything to do with the emptying of privy pits, cess-pools, or who may be in the neighborhood of reservoirs of sulphuretted hydrogen gas. Where its existence may be reasonably suspected, the truth may be easily discerned by letting down fire into the suspected air. If flames spread around the fire, it is an evidence of the existence of the deleterious gas, and the fire not only reveals the fact, but destroys the poison.

The recovery of Mr. Ferguson was a great triumph of medical science. Throughout the whole of what a Spaniard expressively calls a *nòche tríste*, there was a regular game of chess between death and medical art; each move on one side called for an opposing move on the other, and the ultimate point to checkmate death governed every move on the part of the physicians. The triumph was complete at day-light. Mr. Ferguson is advanced in life, somewhat feeble in health, but remarkable for his regular, abstemious and prudent habits. But taking his age, and debility into consideration, in connection with the violent character of the poison he inhaled, his escape from death is one of the most remarkable occurrences I have ever met in the practice of medicine.

REVIEWS.

ART. IV.—*A Practical Treatise on the most common Diseases of the South*, exhibiting their peculiar natnre, and the corresponding adaptation of Treatment. To which is added an Appendix, containing some miscellaneous matter. Also a Glossary explaining the meaning of the Technicalities, or medical phrases, used in this book. By THOMPSON McGOWN, M. D., Graduate of Transylvania University, Member of the Lexington Medical Society, and a Practitioner of the South. "Is there no *balm* in Gilead? is there no *physician* there?" Why, then, may not all be healed, or profited? Philadelphia: Grigg, Elliot, & Co. 1849. 8 vo. p.p. 441.

This, it must be confessed, is not a very prepossessing titlepage. The author has undertaken one of the most difficult of tasks—to write a book on medicine at once scientific and popular. Horace considered that an author had attained every point who had succeeded in mingling the useful with the agreeable. It was deemed by the ancients one of the most dangerous feats in navigation to sail between Scylla and Charybdis. No doubt both these achievements demand great talent, skill and address, but we question whether either is as difficult as it is to compose a scientific work which, while it is adapted to the capacities of the populace, is also fitted to instruct the professional reader. Dr. McGown thinks he has succeeded in both particulars, and that his book "will be of great value to students of medicine, young, and even old practitioners, and those who have recently emigrated to the South or south-west, and the southern and southwestern people generally." We are not going to

be so illnatured as to gainsay this, or in any way attempt to disturb the feeling of complacency with which our brother regards the offspring of his pen. We hope his treatise will prove to be all that he believed respecting it when he sent it abroad upon its benevolent mission.

Dr. McGown is a decided believer in sectional medicine. He holds that medical books to be valuable in the South must be written in the South, and ascribes to Dr. Cartwright the sentiment that "the best works extant on *diseases of the South*, are those of Hippocrates, the father of medicine." We have more than once expressed our emphatic dissent to this doctrine, and we can imagine the feeling of surprise with which the eminent physician just alluded to will find himself quoted for such an opinion. Dr. Cartwright has declared that Hippocrates has given the "best descriptions" of southern diseases, but to say that "his works on diseases of the South are the best extant," would be a great libel on the profession. It would indeed be time to "throw physic to the dogs," if no improvement had been made in the treatment of "diseases of the South" during the long centuries of professional toil and study that have elapsed since the days of the Coan sage. And medicine, we think, must resign its high pretensions to science if it can be shown, that it is a mere local, sectional thing, destitute of principles of general application, which must be studied in special localities, under teachers educated with special reference to particular diseases—if it can be shown, that only northern physicians are qualified to teach and practice their profession in the north, and none but physicians of the south are fit for southern practice and teaching. Still, a treatise on the particular diseases of the South written by a competent observer who has had long experience in their management, must possess its advantages. It is likely to be more graphic and truthful than the production of a writer who had never witnessed the phe-

nomena he describes; and hence every contribution to our medical literature from the pens of southern physicians is welcomed by the profession in every quarter of the country.

The principal subjects treated of in this volume are the following:—Malarious diseases, Intermittent Fever, Cachexia, Tuburculous Cachexia, Scrofula, Chronic Rheumatism, Tabes Mesenterica, Chronic Bronchitis, Hemoptysis, Dropsy, Enlargement of the Spleen and Liver, Epilepsy, Puerperal Convulsions, Dyspepsia, Leucorrhea, Dysmenorrhea, Congestive Fever, Remittent Fever, Yellow Fever, Acute Rheumatism, Typhoid Pneumonia, Diarrhea, Dysentery, Asiatic Cholera and Croup. In an appendix some notice is taken of certain miscellaneous matters, as Gonorrhea, Concussion, Incised Wounds, Gun Cotton, Collodion, Worms, Catarrh, Ephemeral Fever, and Itch. A glossary is added for the benefit of non-professional readers.

If it was thought worth while, we might institute an inquiry as to how far some of the above recited affections can properly be claimed as "diseases of the South." In what sense, for example, is chronic rheumatism, or dyspepsia, or typhoid pneumonia, or epilepsy, or dysmenorrhea, or itch, a Southern disease? Doubtless they all occur in the South, as they occur in all countries, but there is no propriety in bringing them into such a category except for the purpose of pointing out the peculiarities imparted to them by the climate and other influences of the South, and this our author has hardly essayed to do. We expect a treatise on diseases of the South by a southern physician to contain something distinctive. We expect to find in it something better than vague generalities, or even sound opinions and good extracts gathered from English, French, and American authors. It ought to be an exponent of the professional opinion and practice of the South. It ought to consist of graphic de-

scriptions of the complaints of the country, their peculiarities, the treatment applicable to their modifications, their statistics, and, as far as dissections have revealed anything, the post-mortem appearances. In a word, it ought to be the record of an observer on the spot, and to contain what the eye-witness alone can impart. Such a work is highly interesting and instructive. It is sought after with avidity, because it comprises new facts and faithful histories—is a mine of original observations. The author of such a work must be a man who can "employ sometimes the eye of the body, and at others that of the mind," who has a talent for detail as well as powers of observation, and "who unites with the industry of the mechanic the soul of the philosopher."

Our conviction is that the treatise before us cannot be ranked very high among the works which "the diseases of the South" have called forth. It appears to us as evincing a want of judgment, or tact, or, to say the least, of self-reliance, that the author deemed it necessary to introduce his work with certificates as to his professional standing from "ministers of the gospel," "sheriffs," "ex-clerks of courts," and "attorneys at law." This may do very well for the popular wing of his readers, but we fear that it will have any other effect than to advance his work with his professional brethren.

Art. V.—*Ether and Chloroform:* their employment in Surgery, Dentistry, Midwifery, Therapeutics, etc. By J. F. B. Flagg, M. D., Surgeon Dentist, Member of the Rhode Island Medical Society. Philadelphia: Lindsay & Blackiston. 1851.

Dr. Flagg has performed an acceptable service by this monograph on Anesthesia, and has presented the claims of the subject in a clear, forcible and philosophical manner. In 1849 the writer of this thought there was too

great a disposition to resort to anesthesia in season and out of season, and an admonitory paper was published in this Journal on the subject. There seems to be now a current setting in from the opposite quarter, and there is something more than a salutary timidity in relation to the agents of anesthesia. The work of Dr. Flagg is well calculated to teach correct views, and to lead to proper conclusions.

Dr. Flagg's book treats of the following subjects: Oxide of Ethyl, or Ether, Chloroform, its Chemical Constitution, Ether, Review of the History of its Inhalation, General Directions for Administering Ether, etc., Physiological Effects of Sulphuric Ether, Sulphuric Ether in Surgery, Pathology, considered in connection with Ether Inhalation, Diagnosis, assisted by Ether Inhalation, Neurology, New Theory suggested, etc., Psychology, in connection with Ether Inhalation, Chloroform, as a Local Anesthesia, Anesthesia in Midwifery, Correspondence in Relation to the Efficacy of Ether and Chloroform, Miscellaneous Cases, Sulphuric Ether, and Unfavorable Impressions in regard to its use.

The following remarks are useful and judicious, and it is well for the inexperienced to have the advice contained in them, from such a discreet, experienced practitioner as Dr. Flagg. He says:

I know of no condition wherein the use of this article can be considered as really dangerous, if governed by a knowledge of its effects under all circumstances, and handled with that prudence which should ever be exercised in the use of all powerful agents. Steam may be used with *safety* in a poor boiler, in view of certain considerations, none of which, however, embrace the idea of ignorance or recklessness on the part of the engineer.

Ether, to be inhaled into the lungs, should be very highly rectified, washed free from its acid and alcoholic properties, rendering its specific gravity but little more than half that of distilled water.

No apparatus should be used as an *inhaler* which does not amply provide for the admission of atmospheric air, or that by any means would render the breathing difficult. A good sponge, well and frequently saturated with ether, is probably the best and simplest method of administering it; but a tumbler or cup for the purpose of holding a sponge, has been both convenient and economical, particularly when the frequent use of ether is required.

It is well to establish that understanding between yourself and your patients which will secure their most implicit confidence, both in yourself and in the full power of the ether to accomplish the end desired, requiring them to answer any question you may put to them while inhaling, as long as they perfectly comprehend you. By the *manner* in which they answer, you will find one very good guide when to perform the simple operation of extracting one or two teeth. I have found that partial etherization has been preferable in nearly all short operations, and particularly where the coöperation of the patient has been at all desirable.

The pulse should always be consulted. Its general tendency is upward or quickened. When this takes place very rapidly, it is proper to cease giving the ether for a few inhalations, or until reaction takes place, when a repetition of the ether will not unfrequently promote its downward tendency. Under ordinary circumstances I consider it safe to increase a pulse to 160 (one hundred and sixty) beats in the minute; or to suffer it to decrease to 50 (fifty), but of course there must be exceptions to this rule too obvious to need particularizing.

The expression of the countenance and temperature of the head should be observed. When the face becomes suddenly turgid, cold water should be applied to the forehead and temples, suffering the patient to breathe ammonia, or concentrated vinegar, allowing at the same time plenty of fresh air, directing them to take full and rapid inspirations. The variation of the temperature of the head is best detected by the habit of taking the pulse from the temporal artery.

The ether should be brought gradually to the mouth of the patient,—by so doing all irritation of the larynx and lungs is avoided. Direct to take regular and natural inspirations, to avoid swallowing the vapor; and should

the breathing become stertorous, or in any way distressed, desist from its use until the natural breathing is restored.

If it should be found desirable to give the ether to that extent to induce narcotism, never suffer yourself to be thrown off your guard by any demonstration on the part of your patient. Firm, cool conduct on your part is more remarked by the patient than the casual observer would suppose. It is not unfrequent that a loud outcry may be induced, a distressing groan, or other manifestations of inconvenience or pain, which invariably pass off, and the strongest assurances are given by the patient, if aware of this fact, that he knows of no particular reason for such conduct.

It will be found, after inhaling for a minute or two and no effect is produced, that by allowing the patient to take one breath of atmospheric air considerable dizziness is felt. As a general thing, a very few inhalations after this are sufficient; and if the patient should resist, it is best not to meet that resistance by any physical force, but by firm yet kind treatment.

Should the operation be one that will require the introduction of the finger or thumb between the teeth of the patient, it may be well to protect it with a bandage, in view of his closing the mouth.

If ether should produce much prostration (which it is most apt to do when the atmosphere is least charged with oxygen), it is well to recommend self-exertion, as walking about, &c.; but if the desire to sleep is too strong to be resisted, entertain no fear from that indulgence, as the patient will soon awake refreshed.

After inhaling for a certain period, should any spasmodic action occur to retard breathing, sprinkling a little cold water suddenly on the face, or a pretty active slap between the shoulders, will be sufficient to relieve any obstacle in this respect.

I have occasonally given the ether for the removal of a tooth, and, when the effect passed off, some little complaint of headache was made, but a few inspirations of the same by the nose will invariably remove this difficulty.

The foregoing directions were prepared by myself in 1847, and published in the "Dental News-Letter," for the purpose more particularly, of securing a safe administration of ether in dental operations. When used, how-

ever, for painful and long-continued surgical cases, it should be given more intensely. The knife should not be used until the patient is brought completely under its influence; and fresh ether and fresh air should be alternately inhaled in such proportions as the case may require to keep the patient perfectly passive.

When used in labor, the directions are so very simple as to render it almost impossible that any one can be injured by it, even if she should take into her own hands its supervision. The pains are of a character that may always be entirely relieved or much mitigated by the ether, at a point far short of the loss of consciousness; and no woman of ordinary judgment could be using the ether for a space of five minutes, under these circumstances, without really knowing more about it than any one can tell her, though a volume be filled in so doing. It is only necessary that the cloth or sponge should be frequently supplied with fresh ether. I would be understood in this, of course, to have reference to a natural labor and healthy condition of the patient.

In regard to its use in complicated cases, it will often be necessary to administer it to its greatest extent, and in view of this, those directions which are given for its use in dentistry and surgery will be found applicable.

I believe there can be no previous condition of health which can be made to suffer by a judicious use of ether in childbirth, so much as by withholding it, unless, indeed, it be aneurism of the aorta; and even to this critical condition of the system do I carry my doubts.

And in connection with this subject, we republish the following conclusions of M. Longet:

1st. In etherized animals there is absolute momentary suspension of sensibility, as well in all parts of the cerebro-spinal axis, usually sensitive, as in the nervous trunks themselves.

6th. The action of ether on the nervous system is much more directly and completely stupifying than alcohol, which merely renders the sensibility more obtuse, without suspending it entirely, at least in the nervous centres.

7th. Ether abolishes momentarily, but completely, the excito-motor, or reflex action of the spinal marrow and medulla oblongata; and, consequently, acts in an opposite manner to strychnine and opium, which exalt it.

9th. The functions of the encephalic centres always are suspended before those of the spinal marrow, and return before them.

10th. Ether supplies a new means of isolating, in the living animal, the seat of general sensibility from the seat of the intellect and will.

11th. In animals, we can so graduate the action of ether as to produce, at will, two stages, which I name, 1, *Etherization of the cerebral lobes*, 2, *Etherization of the annular protuberance.*

13th. Ether is only preventive of pain when it acts on the annular protuberance.

14th. In animals which have suffered etherization of the annular protuberance, this organ always recovers its functions as the perceptive centre of tactile impressions, before it becomes itself a sensible organ.

15th. The course of the phenomenon of etherization is far from being the same in men as in animals.

16th. The process of *de-etherization* of the annular protuberance may begin while *etherization* of the cerebral lobes still continues. This explains the cries that take place towards the end of some operations, which commence amid the most perfect quiet; cries, however, of which the patient retains no recollection on awakening.

17th. The *true chirurgical period* corresponds to that of *etherization of the annular protuberance* or absolute insensibility.

18th. For some time after the faculty of sensation is restored in etherized animals, there is transient exaltation of the sensibility.

20th. At a particular period of the experiments, the blood becomes almost black in the arteries. *Insensibility* always *shows itself previous to this occurrence.*

21st. If, after the point of total insensibility, inhalation is continued, the animals (rabbits), *cæteris paribus*, die within the space of from six to twelve minutes.

22d. On the contrary, on mixing a greater quantity of air with the vapor, the period of insensibility may be

kept up a long time (three-quarters of an hour and more) without injury to the animal's life.*

23d. Ether introduced into the stomach does *not* produce insensibility in animals.

24th. In etherization, the functions of the *ganglionic nervous system* appear to be over-excited, and this system appears to become a sort of *diverticulum* for the nervous power which has, for the time, abandoned the *cerebro-spinal system.*

25th. The death of etherized animals is, perhaps, owing to a sort of asphyxia, originating particularly in the respiratory nervous centre.

The section on Psychology, in connection with ether inhalation, is full of interest; it has all the charm of a novel, and is something of a relief from the dry details of practice.

"Chloroform, as a local anesthesia," contains a number of very useful suggestions, for which the practitioner of medicine will find abundant use. We can bear testimony to the great value of chloroform as a local application; we have used it in a variety of pain, and it has scarcely ever disappointed our hopes. We are surprised to find no reference in Dr. Flagg's remarks to the combination of sulphate of morphine with the chloroform, for obtaining the complete anesthetic effects locally. The proportions are x. grs. morphine to ʒi. chloroform. The following cases are interesting:

A letter from my son contains an account of a case, of sufficient interest to justify the following extract:—"While in Valparaiso, I got a small, but long and hard thorn in my finger, at the root of the nail. I partially

* It would appear, from the above 21st and 22d propositions, that these experiments were carried on by means of an instrument calculated to exclude the atmosphere as much as possible. It was by such a course that the valuable horse in London, and the mouse alluded to in the "Lancet," were sacrificed to the cause of science.

extracted it, thinking I had it all; my finger festered, swelling much. I bathed it in lye-water, poulticing it, and was fearful of felon; but seeing a black speck, I attempted laying the finger open; the pain was excruciating on account of inflammation, but as soon as I brought blood, I applied a drop or two of chloroform. I then laid it open nearly to the bone, and about one inch in length, taking out even more of a thorn than at first, *and not feeling as much pain as I should had I operated upon some other person!* I then bandaged it, and allowed it to heal in the blood. At the end of the week I removed the bandage; the finger was well, and I saved the nail. *What was the value of that chloroform to me?*"

Dr. Isaac Hays reports a case of neuralgia of the foot, before the College of Physicians, Philadelphia. It is found in the "*American Journal of the Medical Sciences*," p. 550. Dr. Hays stated, "that he had employed the chloroform to produce local anesthesia, with apparently the most happy effects, in a case of neuralgia, occurring in a gentleman 50 years of age, who had been for a long time a sufferer from neuralgia of the foot, in which all the remedies that had been previously employed, failed to produce relief. Dr. H. was called to this patient about eight days since, and found him in intense pain, which had deprived him of sleep the whole of the preceding night. Dr. H. directed the affected parts to be enveloped with a pledget of lint, or a few folds of muslin wet with chloroform, and the whole to be covered with a portion of oiled silk, to prevent evaporation; on the next morning he found him entirely free from pain, which has not since returned. Whether the relief experienced in this case is to be ascribed to the local anæsthesia produced by the chloroform, or is to be considered as a mere coincidence, Dr. H. does not pretend to decide."

"Since this communication was made to the College, the further history of this case has shown that an arrest of the paroxysm is always accomplished by the application of the chloroform; and by the use of the article, several other similar cases have been attended with like results."

The following case illustrates the value of chloroform thus used: A lady for whom I had filled a large number of teeth, was much troubled by an abscess forming at the

root of one of the incisors. It would occasionally become very painful; swell and discharge; when relief would ensue for several weeks. I had frequently treated this case with much care, till finding all accustomed remedies failing, and the annoyance becoming insufferable, the patient concluded to have it extracted. I stated to her that the local application of chloroform might give her one more chance of retaining her tooth, if used at a proper moment. I chose for that time, the earliest symptom of disquiet in the region of disease. The result has been immunity from pain, and the tooth is restored to its former usefulness. It has now been necessary to pursue this treatment but four or five times, at periods varying from one to two months, and the gums present a healthy appearance intermediately.

The section on anesthesia in midwifery contains several very interesting reports of cases. We believe that when ether or chloroform is judiciously administered to a female in labor, in the recumbent posture, on an empty stomach, there is almost, if not quite, a complete absence of danger. We have used chloroform many times, in cases of labor, since the appearance of Dr. Beatty's paper on the subject, in the *Dublin Medical Journal*, and we have not seen one untoward event in any of the cases. We quote from Dr. Flagg's work, the following letter from Mr. Lansdowne, of Bristol, England, to Professor Simpson:

I have now used ether or chloroform in seventy-one midwifery cases; I have two modes of administering it; the one with a bladder, in which is placed a brass pipe with a stop-cock, and into this is screwed, after I have poured the chloroform into the bladder, a piece of elastic tubing with a mouth-piece, the whole being pierced with a bore three-eighths of an inch, through which the vapor can be readily inhaled. If I find I am likely to be giving the chloroform for a long time, I use this apparatus, both for the sake of convenience and also of economy, as ʒj will last me nearly or quite an hour with this; and should

I use it many hours, it not only effects a great saving of material, but does not so frequently require replenishing, and is always ready at the approach of each separate uterine action, and it may be (as has been the case with me) used by any friends, or by the nurse, should the practitioner require to be absent for a short time. The other apparatus is an inhaler, such as is commonly sold; it is made of a thin, pliable lead, adapted over the nose and mouth, having a piece of perforated zinc in its front, and containing a piece of sponge, over which the chloroform is thrown; the depth of this inhaler is such as to prevent the nose being touched by the chloroform. It is home manufactured, not expensive, and very easy of construction. This latter I make use of if I am likely to be wanting it for a short time only; it requires to be supplied afresh every five or ten minutes, and accordingly I use ʒj or ʒss, which latter is my quantity when about to extract a tooth. If the action of the uterus causes great pain, as is frequently the case in an early period of the labor with the first child, I commence giving it as soon as the os uteri is sufficiently dilated for the head to pass; I have given it when the opening has not exceeded the size of half-a-crown. I believe it may be given with impunity as early in the labor as we please, and the only obstacles to its being so used that I can see, are the inconvenience to the medical attendant, in being thus occupied with one patient for such a length of time, and also the very great expense which such a lengthened use of it must entail. On the patient's account, I can see no possible reason why it may not be used for a whole day, or even more; indeed, I cannot see why a limit should be set to the length of time in which it may be used. I have no doubt but that it will soon be the anodyne generally used at the latter stages of painful cancerous diseases. The greatest length of time in which I have used it has been 16½ hours, a fresh inhalation being made at every renewal of the action of the uterus; in other cases I have given it 11½ and 12 hours, and the only reason of the inhalation being limited to this time has been the cessation of the necessity for its use, namely, that the child has been born, otherwise it would have been continued until such event had taken place.

I have found that nearly all my patients have recovered very rapidly; most of those who have had children pre-

viously, have been astonished at the unusual rapidity of their recovery.

I find no difference as to the expulsion of the placenta and the subsequent discharge, when administering chloroform, to what takes place in the usual natural labor. I have, upon two occasions, used it for severe after-pains, pains so severe that their cries could be heard at a considerable distance; indeed, they appeared worse than the pains of actual labor; in both cases the pain was completely subdued by its use. Both these persons had determined not to avail themselves of the benefit of the chloroform during labor; neither did they, but they were delighted afterwards with its soothing effects. The former of these, I had long resolved to give it to for this express purpose; it was her thirteenth child; her labors have always been very rapid, scarcely any pain accompanying them, but no sooner has the child been born than her agony has been almost past bearing, the pain recurring at intervals for a fortnight. Upon this occasion I gave it to her three times within the first ten hours, and she had nothing to complain of afterwards.

As regards sickness, I have not found that symptom, except where fluid has been previously taken; on the contrary, if the patient has been sick, the chloroform has almost invariably checked it. The cramp I have not heard them suffer from whilst under its influence. I have never yet met with anything which has caused me to regret having used it.

No practitioner of medicine is prepared for the proper practice of his duties, who is not qualified to use anæsthetic agents upon proper occasions, and the necessity for such qualification is as great as for any other duty required in the practice of medicine. If it is proper to relieve suffering, it is equally proper and obligatory to relieve it without suffering, if possible, and it is infinitely of more importance that a medical man shall possess full knowledge of the uses of anæsthetic means, than of the use of instruments for lithotomy or lithotrity. He may have use for the first remedies ten thousand times where he would require the instruments once.

A few days since, we were called upon to lance a severe paronychia, in a delicate, sensitive female. The agony experienced in the operation is well known to those who have had a trial of it, and we determined upon the use of the chloroform. The patient readily acquired its influence, and the finger was laid open to the bone, without any more suffering on the part of the patient than if she had not been disturbed. She speedily recovered from the effects, and assured the writer, next morning, that she had not enjoyed such a refreshing sleep for a long time. One of the greatest merits of anæsthesia in these and similar cases, is the absence of those sufferings that were once considered unavoidable after the operations are over. The patient in this case has scarcely had any suffering since her finger was opened, and this is not the rule in paronychia generally.

A short time since, a negro man was thrown from a horse and very much injured. He was so filled with pain that he could not bear the least motion without screaming. The left arm was badly broken, and gangrene attacked the arm and destroyed all vitality nearly up to the shoulder joint. We were called upon to visit him in the country, with Dr. Young, for the purpose of amputating the limb. In order to change the patient's position, for the removal of the arm, we attempted to raise his body, but his agony was so great that we were compelled to desist. Dr. Jacob, who accompanied us to the country—and whose very curious case, under anæsthesia, was reported in the February number of this Journal—was requested to attend to the chloroform, and a few inspirations of it, on the part of the patient, enabled us to move him as we pleased, without any sensibility on his part. The chloroform was continued throughout the amputation; the arteries, four in number, were tied, the stump dressed, and everything completed, without any knowledge on the part of the patient. We would not have been without the beneficial

effects of chloroform in this case, for any consideration. We had abandoned surgery before the introduction of anæsthesia, but have resumed it, now that we can relieve without suffering.

But let no one consider that he may use anæsthesia indiscriminately; and as we have said that no man is qualified to discharge his duty as a physician, who is not qualified to use anæsthetic agents, we add, that we know of no finer manual for their use than this little book of Dr. Flagg's. We cordially commend it to the study of the profession, and very sincerely thank the author for the publication. B.

ART. VI.—*The Medical Student's Guide in Extracting Teeth;* with numerous cases in the surgical branch of Dentistry. With illustrations. By S. S. HORNOR, Practical Dentist. Philadelphia: Lindsay & Blakiston. 1851.

Mr. Hornor has prepared an excellent manual, on a subject which is not generally studied enough in preparing for the practice of medicine. Students rush in crowds to see a formidable operation in surgery, and treat with indifference those matters that may make daily calls upon them. Among these matters is the treatment of toothache, and it is important that a physician shall know all he can possibly learn on such subjects. He should qualify himself in all his responsible duties well enough to discharge them with ease to the sufferers and credit to his science; and a man's qualifications for other portions of his profession may be judged from his performance of as small a duty as the extraction of a tooth. There is a large volume of medical science connected with carious teeth, and we do not see how a medical practitioner can pretend to understand his profession, or offer his services as a physician, without an intimate knowledge of every-

thing connected with diseased conditions of the teeth. In numerous cases an accurate diagnosis depends upon this knowledge, and by it he is led to form true views of what would be a field of error without it. There is no more reason why a carious tooth should be driven from the management of the medical practitioner, than a carious tibia, or femur, and it is often as important to understand the first as either of the two last.

Mr. Hornor has written his little guide on the extraction of teeth with a thorough appreciation of his subject, and his rules and advice are very excellent. The instruments he commends "as absolutely necessary, are, the straight forceps, the double curved forceps, the key, the elevator, punch, and screw; the curved forceps, the hawkbill, and the wedge forceps, several of which are applicable to the jaws."

There is a concise and clear explanation in this little work of the uses of the various instruments, we have enumerated, in the proper application to the various teeth, and we advise inexperienced practitioners in tooth drawing to make this short treatise the man of their counsel on the extraction of teeth. Such persons will never have cause to regret a careful perusal of this work, and some of their patients may have good cause for feeling grateful to them for having condescended to study Hornor on tooth drawing.

The admirable little monograph before us is well printed, and the illustrative drawings of the instruments are admirably executed. By the proper use of proper instruments, the extraction of teeth may require a smaller degree of anasthesia than the awkward bungler finds necessary. B.

ART. VII.—*First Principles of Medicine.* By ARCHIBALD BILLING, M. D., A. M., F. R. S. Second American, from the revised and improved fifth London Edition. Philadelphia: Lea & Blanchard. 1851.

This work is well adapted to two classes of medical men, which embrace nearly the whole profession—those who have a long and familiar acquaintance with the diseased actions of the human economy and the use of therapeutic agents, and those who are desirous of making acquaintance with these interesting phenomena. The first may find a solution of many mysterious occurrences, whose nature they could not understand at the time they happened; the last may know their meaning as they spring up.

Dr. Billing's work can scarcely be regarded as a systematic work on practice, and the routinist who loves to turn to a particular disease to find out what to give, would leave this book in despair. But the physician who wishes to know the philosophy of disease and of cure, may study these pages with no ordinary degree of satisfaction, and he will assuredly rise from the perusal of the work with his confidence in the therapeutical agents of his profession greatly enlarged. The merits of the work may be considered as well established, in the fact that five English editions and two American editions have been published. The student who may devote himself to the work will be at no loss to understand why the book has manifested these signs of popularity, and why the profession has exhibited such an estimate of its value. Almost every page is replete with practical knowledge, and the intelligent practitioner may find here a clue that will lead him through devious labyrinths.

We are far from coinciding in all the views advocated by Dr. Billing. Philosophic truth is not always attained

in the dashing, off-hand, *ad captandem* style used too frequently by our author.

It would be a difficult thing to give a correct idea of this work by anything like a synopsis, or by any series of quotations. There is scarcely any item in it that is not dependent upon other portions of the book, and we can give no better advice to our readers than to urge them to read the work carefully and study it thoroughly. They will find themselves abundantly compensated for the labor, if labor they find the pleasures connected with a large increase of knowledge.

We regretted to see a valuable work like this, published by as respectable a house as that of Lea & Blanchard, disfigured from the beginning to the end with typographical blunders. They occur so frequently in some of the forms that we were tempted to believe that the proof-sheets had never been read. The printers of this edition, at West Brookfield, Mass., have shown a lamentable degree of negligence in their part of this publication, that will not enhance the character of their establishment. At any rate, they will not soon rival the fame of the Stephens, nor of Caddell. B.

ART. VIII.—*Review of Chemistry for Students.* Adapted to the courses as taught in the principal Medical Schools in the United States. By JOHN G. MURPHY, M. D. Philadelphia: Lindsay & Blakiston. 1851.

We have been somewhat surprised at the laudatory notices of this work which have appeared in some of the Medical Journals. We cannot even surmise a necessity for the publication, after the recent editions of Bowman and of Fownes, unless it is that those very valuable works are not adapted to the courses as taught in the principal medical schools of the *United States*, and that this of Dr. Murphy's had

the eminent advantage of being thus adapted. But we must say, if Dr. Murphy's work possesses this advantage, its adaptation belongs to a class of medical schools with which we have not the honor of an acquaintance.

The author of this Review of Chemistry certainly has not a very felicitous style for imparting information. He is often very inaccurate in his statements, and when he is not, he frequently hides his meaning in a labyrinth of words that makes the reader oblivious of the intentions of the writer.

We are sorry to speak thus of a book whose purpose is to lighten one of the labors of the medical student, and especially a book in an important branch of medical science that is too much slighted by medical students. Everything that tends to lighten the labor of acquiring chemical science fully, everything that is adapted to the important end of attracting students to the study of chemistry, shall command our approbation and support. We should rejoice to see that important science a much greater favorite than it is with medical students, and we have never been able to see why it is not. To us it is one of the most fascinating of all the departments of medicine, and its claims upon the study of the candidate for the honors of medical science, are in the highest degree imperative.

The work of Dr. Murphy will not greatly advance the interests of chemistry among students of medicine, and will not create a *furor* in its favor anywhere. We regret this for many reasons, one of which is that the medical profession is indebted to Lindsay & Blakiston for many valuable medical books, which have done good service for medical science, and we are sorry to see them send forth such a book as this.

These various works may be found at the bookstore of Beckwith & Morton. B.

NOTICES OF PAMPHLETS, PERIODICALS, ETC.

ART. IX.—*The American Journal of Science and Arts.* Conducted by Professors B. SILLIMAN, B. SILLIMAN, JR., and JAMES D. DANA, aided in the Departments of Chemistry and Physics by Dr. WOLCOTT GIBBS. New Haven, Conn. March and May numbers.

We have been in the habit of publishing the table of contents of each number of this valuable periodical, but being unable to find room in either our March or April issue for the contents of the March number, we now give the names of the leading papers in the March and May numbers of that able work.

The March number contains papers on the following subjects:

On the Velocity of the Galvanic Current in Telegraph Wires; by B. A. Gould, Jr., in a Report to Professor A. D. Bache, LL. D., Superintendent of the U. S. Coast Survey.

Observations on the Gnathodon beds around the head of Mobile Bay; by Rev. C. S. Hale.

On the Mineral Springs in Canada; by T. S. Hunt.

Whirlwinds produced by the Burning of a Cane-brake; by Alexander Fisher Olmsted, A. M.; with a plate.

Description of a new Graptolite found in the lower Silurian Rocks near the Falls of St. Croix River; by H. A. Prout, M. D.

On the Direction of the Spark from Secondary Currents under the influence of Helices or Magnets; by Professor Chas. G. Page, M. D.

On the Conduction and Distribution of the Galvanic Current in Liquids; by Prof. Chas. G. Page, M. D.

Two Problems by Bäpu Deva Shästri, Native Professor of Mathematics in the Benares College.

On the Vents of Hot Vapor in Tuscany, and their relations to Ancient Lines of Fracture and Eruption; by Sir Roderick Impey Murchison.

On Kirkwood's Law of the Rotation of the Primary Planets; by Prof. Elias Loomis.

On a new Genus of Crustacea in the Collections of the U. S. Exploring Expedition under Capt. C. Wilkes, U. S. N.; by James D. Dana.

Mineralogical Notices.

Notices of Coal in China; by D. J. M'Gowan, M. D.

Abstract of a Meteorological Journal kept at Marietta, Ohio, for the year 1850; by S. P. Hildreth, M. D.

On the different Chemical Conditions of the Water at the Surface of the Ocean and at the Bottom, on Soundings; by Aug. A. Hayes.

On the Limit of Perpetual Snow in the Himalaya; by Lieut. Strachey.

Analyses of the Ashes of certain Commercial Teas; communicated by Prof. E. N. Horsford.

And fifty-three pages of scientific and miscellaneous intelligence, and bibliography.

The May number contains the following papers:

On the Aboriginal Monuments and Relics of New York; by E. G. Squier, A. M.

On the Corrosion of an Alloy, composed of Copper and Silver, in Sea Water; by Aug. A. Hayes.

On the Calculus of Operations; by John Patterson, A. M.

On the Mammoth Cave of Kentucky; by Professor B. Silliman, Jr.

Descriptions of new species of Fishes; by William Prescott, M. D.

Meteorological Observations: Abstract of a Meteorological Journal kept at Beloit College; by S. Pearl Lathrop, M. D.

Miscellaneous Notices; by J. W. Bailey.

On the Chemical Constitution of the Mineral Warwickite; by T. S. Hunt.

On Coral Reefs and Islands; by James D. Dana.

On the Infusoria and other Microscopic Forms in Dust-showers and Blood-rain; by Dr. C. G. Ehrenberg.

Notice of the Geology of the Florida Keys, and of the Southern Coast of Florida; by Prof. M. Tuomey.

On the Law of the Rotation of the Primary Planets; by Daniel Kirkwood.

New Genera of Fossil Corals from the Report by James Hall, on the Palæontology of New York.

Analyses of Pitchstone Porphyry from Isle Royale, and of a Crystal of Phosphate of Lime from Hurdstown, New Jersey; by C. T. Jackson, M. D.

On the Volatility of Phosphoric Acid in Acid Solutions when heated; and on Schmidt's Process for the Determination of Nitrogen; by J. B. Bunce.

On Bromine as a Toxicological Agent; by Henry Wurtz.

On an improved Remontoire Escapement for an Astronomical Clock; by J. Fulton.

And forty pages of scientific and miscellaneous intelligence, and bibliography. B.

Art. X.—*Cases of Vesico-Vaginal Fistula, treated by operation.* By George Hayward, M. D.

We are indebted to Dr. Hayward for a copy of this interesting monograph. It contains the details of nine cases, which were operated on twenty times. The concluding remarks of this contribution to practical medicine will interest many of the readers of this Journal, and we quote them:

Though I have extended this paper to somewhat of an unreasonable length, I hope I shall be excused for adding a few words in order to explain, a little more in detail, the mode I have adopted in doing the operation, and of managing the patients afterwards.

Before the discovery of the anæsthetic powers of ether, I found that the most difficult and painful part of the operation consisted in bringing the bladder down to the os externum. It is now done with comparative ease, and without causing the slightest suffering to the patient. I have administered the ether in the three last operations of this kind, and have been able to bring the bladder down, pare the edges of the fistula, introduce the ligatures and the catheter, and restore the bladder to its place, in twenty minutes; when in all the cases before, in which I did not use it, the same process required an hour, and

during the most of that time the patient was suffering severely. Besides, the fistula is sometimes in such a situation, as when it is near the fundus of the bladder, that without this agent, or some similar one, it would be impossible to bring it in view.

The patient being thoroughly etherized, the bladder can be brought down by introducing a large-sized bougie (one made of whalebone, highly polished, is to be preferred) into the urethra, to the very fundus of the bladder, and carrying the other end up to the pubis. In this way the fistula is readily brought in sight. Its edges can be pared with the scissors or a knife, though usually both these instruments are required; and this part of the operation is much facilitated by holding the edges by means of a double hook. In all the cases that I have examined, these edges are thick, hard, and usually of a white color. It is not difficult, therefore, to dissect up the outer covering from the mucous coat of the bladder to the distance of two or three lines. The needles are then to be passed through the outer covering only, and as many stitches must be introduced as may be found necessary to bring the edges of the fistula in close contact.

Since my first operation, I have used a short needle with the eye near the point, made to fit on to a long handle. The instrument, when the two parts are together, looks not much unlike a tenaculum, though not so much curved, and considerably broader near the point.

As soon as the needle is passed through one side of the fistula, it is immediately seized by a forceps, the handle is withdrawn, and the needle is then carried through. It is to be then again fitted to the handle, and carried through to the other side in the same way. As many stitches as may be thought necessary to bring the parts into close contact can in this way be taken with great ease. One thread of each stitch is to be cut off; it is convenient to leave the other, as it enables the operator and patient to know when the ligatures have separated from the bladder.

A large sized female catheter is then to be introduced into the bladder, and secured there by means of a T bandage. The patient should be laid on her side, with the upper part of the body somewhat raised, so as to facilitate the flow of water through the catheter. This should be

removed at least once in every twenty-four hours, as it is very likely to be obstructed by mucus, coagula of blood, and occasionally calculous concretions. In three days I think it safe to remove it altogether, but then it should be introduced at least once every three hours, for ten or twelve days more, so as to prevent any accumulation of urine in the bladder, and consequent strain on that organ.

The diet should consist entirely of liquid, mucilaginous food; such as an infusion of slippery elm, gum arabic and water, flaxseed tea, arrowroot, and milk and water. This diet, in my opinion, should be continued till the ligatures come away.

The bowels should be opened by some mild laxative a few hours before the operation; but it is desirable that they should not be moved again till some days after.

I think it best for the patient to use the catheter once or twice a day for several weeks, and at any rate during that time to avoid making any strong efforts to expel the urine by the contraction of the bladder.

It may be proper to add, that I have never had any troublesome hemorrhage from the operation, nor any alarming symptoms after it. In some cases the pain has been severe for two or three days, and once or twice it has run down the limb, apparently in the course of the sciatic nerve. When performed in the way that I have recommended, I believe it to be attended with very little if any danger, as the bladder is not subjected to any considerable degree of violence, nor any part injured to a great extent.

ART. XI.—*An Address*, delivered before the Suffolk District Medical Society, at its Second Anniversary Meeting, Boston, March, 1851. By SAM'L PARKMAN, M. D., M. M. S. S., one of the Surgeons of the Massachusetts General Hospital.

This is a philosophic view of medicine, but contains some concessions that we are not prepared to admit. The following remarks seem to us to be untrue to that spirit of investigation that has been at work for the last eighteen years, among medical men. Facts do not bear out the charge that "medicine has remained inefficient and powerless, as regards the dscovery of the real cause and nature" of cholera. Dr. Parkman pleads guilty to

the charge, and justifies himself in the following language:

Medicine has been reproached because, in the presence of that scourge, the cholera, which has, with mysterious and deadly step, passed over nearly the whole world, it has remained inefficient and powerless as regards the discovery of its real cause and nature; not even having pointed out a sign by which its approach might be foreseen, even if it were ordained that we must succumb to its devastation, as to a decree of fate. The charge is true; but let only those who are free in this respect, cast the reproach. Has any naturalist ever approximated to the cause or nature of the disease, which in like manner has spread over a large portion of the world, depriving a nation of its subsistence? And yet, which of the two has the most advantages and facilities for arrival at discovery, the one compelled to judge of the hidden processes of disease by obscure signs, or only able to examine its effects after its ravages have been completed; or the other, who has merely to walk into a potato field and make living autopsies of his diseased patients? A mysterious influence has traversed the land, and a class of forest trees, which had for years with each returning spring spread their leaves for grateful shade, now raise their bare branches—a deformity and a barrenness in the midst of the beauty and plenteousness of summer. Has any one shown the causes of this? Has any one advanced even a tenable theory, or made so much as a probable supposition?

We are confident that the cause, nature and phenomena of cholera are as perfectly understood as those of any other disease. A great variety of theories and whims has been started on the subject, as there is in every prominent matter of human interest, but surely medical men may sift fact from falsehood, and know when they have the truth. Volney took a lofty attitude, in his estimation, in philosophy, and looked down contemptuously on the struggles of the various religions of the earth; and after surveying them narrowly, as he thought, he announced

"that here was a variety of religions, all claiming a divine origin, but inasmuch as no one of them would tolerate the claim of any but its own, therefore all were false." He would not investigate; he would not go through a patient analysis of evidence upon the highest question ever submitted to man, but skimmed over the surface of things and toppled over into the mire we have recorded. And thus it is in the investigation of epidemic influences. They demand a great variety of knowledge, on a great variety of subjects, a thorough and extended mastery of all the facts, patient and laborious analyses, and rather than undertake the acquisition and use of these powers, men will listen to the clamors of conflicting theories, and sagely conclude there is no truth, or if there is, it is unknown. These are not the methods by which scientific medicine should be advanced.

How can Dr. Parkman make such an admission as he does in the above extract from his address, in the presence of such labors as those that have characterized the sanitary survey of Great Britain? Have not Chadwick, Grainger, Guy, and a host of other British minds, and Riecke, of Prussia, thrown some light on "the real cause and nature of cholera?" Pray tell us, what disease can medical men honestly claim a better acquaintance with, than with cholera?

With the exception noted, we are much pleased with the spirit and style of Dr. Parkman's address. B.

ART. XII.—*An Address* to the Graduates of the Medical Department of the St. Louis University. By A. LITTON, M. D., Professor of Chemistry and Pharmacy.

Valedictory Address before the Graduates of Washington University, Baltimore. By Professor T. E. BOND.

Valedictory Address to the Graduates of the Medical Department of the University of Pennsylvania. By W. E. HORNER, M. D., Professor of Anatomy.

The prospective progress of Medicine in America: a valedictory address delivered before the graduating class at the first annual commencement of the N. Y. Medical Colleges. By HORACE GREEN, M. D., Professor of Theory and Practice of Medicine.

We have grouped these various addresses together, and take much pleasure in bearing testimony to their merits The following picture of a medical practitioner, from Dr. Litton's address, will be recognised by many as a very faithful one:

The physician is the servant of the high and the low, the rich and the poor; and must be obedient to their call, however unreasonable and capricious. Night, that to others brings the rest and the quietness that nature's tired powers demand, that to beast and to bird is the time of unwearied repose, gives to him no assurance that the slumber of sleep shall be undisturbed. Disease stays not its march to consult his desires or his pleasures; but calls him from the hall of festivity, from the amenities of the social circle and from the holy temple of religious worship. The storm and the tempest, the piercing cold and the bitter wind, that drives labor from its toil to nestle around its warm fire-side, and force the beast to seek his lair and the bird its nest, delay not his visit; but go he must, oftimes for long and weary miles, through cheerless and deserted tracts, that he may cool the burning brow, or bind up the broken limb of his fellow man. Pestilence, that causes the stout heart to quail and that makes friendship, strengthened by the mutual charities of life and cemented by years of devotion, falter, and, in this hour of need, deny its brother; however terrible its ravages, and desolating its sway, cannot stop him; but he must go to infected hospitals, to dwellings crowded with the victims of the destroying angel, to places polluted with the dead and the dying, unconscious at what moment the archer's invisible shaft may pierce his heart, and force him to leave his wife a widow, and his children orphans, to continue unsupported and unsustained, their dreary pilgrimage of life. Others, with the power of steam, and the speed of railroad, and the wings of the wind, may seek places and climes not infected; but the physician

stands a sentinel upon the watch-tower, to guard the citadel of life, and cannot, dare not, and, God trust, would not be so meanly base, as recreantly to desert those whom hard fate chains to infected regions, and leave them unprotected and unguarded to the fell destroyer's rage."

The following parallel between the law and medical professions, drawn by Dr. Bond is done with truth and spirit:

When the advocate for a client, indicted for a capital crime, stands up to speak in his defence, he must be less than human if he does not tremble under the weight of his undertaking. But serious as is his responsibility, it is shared by others. A mistake might not be mischievous; the Court might correct his law, and the hearts of the jury add force to his pleadings. But in *his* fearful office the physician stands alone. Hastily summoned—perhaps at the dead of night—without a moment's preparation, with no intelligible information as to the nature and extent of the demand to be made upon his faculties, he is hurried to the chamber where death has begun his work. However terrible, however complicated, however unusual the disease, the physician must meet the exigency, and meet it promptly. * * * After you shall have saved a life from the greatest peril, after you shall have restored a citizen to the State, a father to his children, a husband to his wife, you will have done precisely what you were expected to do—what you were sent for to do, and no more will be thought of the matter. In a little while it is quite likely that you will find yourself superseded by another physician, every way your inferior. But he may have flattered the family by some insincere attentions, or astonished them by a parade of learning—he may have been heard to call the back-bone the spine, or the brain the cerebrum, or a bruise an ecchymosis—or he may have won their confidence by the narration of some wonderful cures—or he may be a new man who has lately joined the same church and claims the practice of the brotherhood upon ecclesiastical principles—being determined not to serve God for naught. Or you may be discarded to make room for a mere mountebank, who may have made himself a doctor by the force of his will, and business by the force of his impudence—an utter ignoramus, with no more

knowledge of disease than of the means of curing it, and no more of either than has the more respectable animal that drags him through his daily rounds of mortal visitation.

The address of Professor Horner completed his fortieth year as a medical lecturer, and his address is replete with sound advice, accurate observation, and well matured wisdom. Long may he continue to adorn the station he has long filled with credit to himself, and usefulness to thousands.

Dr. Green did not do his subject ample justice, in his omission of all reference to what the West and South have done for the progress of medicine in America. If he had been familiar with the history of what the physicians and surgeons of those regions have done, he would have been able to throw a flood of light upon the principal features of his address. In another part of this Journal, in a notice of a statement recently made by Professor Peaslee, we have endeavored to vindicate the West, against the continued efforts of the East, to be oblivious to her merits. In addition to what is recorded in that vindication, we ask Dr. Green's attention to the following remarks, contained in a recent publication made by Prof. J. B. Flint:

From the date of the earliest surgical records to the present time, various plans have been proposed and executed for the radical cure of Hernia, by operations with the knife or cautery, by excision, scarification, organic plugs, etc. etc., all of which are acknowledged to have been ineffectual, and many of them absurd or barbarous in the extreme. Velpeau, in his great work on operative surgery, devotes fifteen ample pages to a description of these various processes, which, if their number and failure prove the disease against which they are directed, to have been among the opprobria medicinæ, abundantly convict themselves of being among the opprobriæ medicorum. When I mention that among these processes, that which had been employed more extensively than any

other one, was castration—when, we refer to the astonishing submission to revolting measures which the history of this matter reveals, nothing need be added to show how strong and general has been the desire for a radical cure of this common infirmity. Modern surgery had repudiated the abominations to which I refer, but had afforded no effectual substitute, and had become content with palliative measures as the best that could be done.

The treatment of reducible Hernia as practised by the most experienced men of the profession, may be summed up in the pithy sentence of Abernethy—"You return it" —the bowel—"put a truss on it and keep it on."

Sometime between the years 1830 and '35, a Mr. Stagner of Kentucky, experimenting on his own person, arrived at the discovery which is at the foundation of the present method for the radical cure of Hernia, by means of trusses with wooden pads.

Dr. Hood, a neighboring physician of respectable standing, was not slow to appreciate the value of Stagner's discovery, and, bringing to the application of it his anatomical and surgical knowledge, constructed a truss with which he accomplished a cure in a considerable number of cases. He went to Philadelphia, and became associated with Dr. Heber Chase, whose mechanical turn of mind and accurate professional knowledge, eminently fitted him to impress upon the new instrument the modifications necessary to adapt it to the various forms of Hernia, and to the particular anatomical relations of each. An admirable set of instruments was the result of this partnership —the essential element in their structure, being the Kentucky discovery—which constitute, as I believe, the most valuable improvement in our materia chirurgica that has appeared since the introduction of the ligature as an hæmostatic instrument. All the old fashioned trusses were applied with a view only to retention, and although a cure of the disease sometimes happened under their use, this was not the purpose, nor expectation of it. Soon after Dr. Chase had completed his instruments, they were submitted to a special committee of the Philadelphia Medical Society, appointed to investigate the subject of the radical cure of Hernia. At the head of this committee was Dr. Reynold Coates, a highly philosophical and excellent surgeon, who devoted himself, and engaged his colleagues

for many months in investigating the claims of the new instruments. They examined many patients who had been suffering with rupture for many years, and found a very large portion of them perfectly cured, after wearing the wooden-block truss for a certain number of weeks or months. Their report was highly favorable to the claims of the new instrument, and their conclusions have been verified by other practitioners, whenever a faithful and intelligent employment of it has been tried. From all the evidence which has been collected and published on the subject, I believe we are warranted in concluding that, of any *ten* cases of Hernia, not having any extraordinary difficulties to overcome, *eight* may very certainly be radically cured by a judicious employment of the truss, the invention of which must fairly be reckoned among the contributions of Kentucky to the surgical therapeutics of our favored era.

We seek no particular laudation of the West and South, but we demand that justice shall be meted out to their strong and brilliant claims to the respect and admiration of their professional brethren. The West and South never withold their approbation of their Eastern brethren, but take pleasure in their success and advancement, and this proper conduct should be reciprocated. B.

Art. XIII.—*The Half-yearly Abstract of the Medical Sciences:* being a practical and analytical digest of the contents of the principal British and continental medical works published during the preceding six months. Together with a series of critical reports on the progress of medicine and the collateral sciences during the same period. Edited by W. H. Ranking, M. D., Cantab., assisted by W. A. Guy, M. D., George Day, M. D., Henry Ancell, M. D., and W. Kirkes, M. D. No. 12—July to December, 1850. Philadelphia: Lindsay and Blakiston.

Of the excellent character of this publication it is not necessary for us to say much. It has sustained itself in England for six years, and is worthy of the patronage it

has received. It gives a very fair and useful record of the important movements of medical science, and it should be the companion of all medical practitioners. We commend the work to the favor of the reader. B.

Annual Report of the Louisville Marine Hospital, for the year ending March 1st, 1851.—We have received a copy of this report, and present our readers with the names of the medical officers of the Institution, and a copy of Table No. 5, containing a medical history of the establishment, for the past year.

Physicians on part of Medical Schools.—Professors Paul F. Eve and Samuel Annan.

Consulting Physicians.—T. S. Bell, M. D., C. Pirtle, M. D., and J. W. Bright, M. D.

Consulting Surgeons.—T. W. Colescott, M. D., L. Powell, M. D., and S. B. Richardson, M. D.

Attending Surgeons.—B. I. Raphael, M. D., J. M. Pyles, M. D., and T. G. Richardson, M. D.

Attending Physicians.—D. W. Yandell, M. D., C. L. Lyle, M. D., and W. B. Caldwell, M. D.

Resident Graduates.—Jonathan Clark, M.D., and James Selby, M. D.

***REPORT** of the Diseases and their Results, coincident with the Admissions and Discharges at the Louisville Marine Hospital, from March 1st, 1850, to March 1st, 1851.*

DISEASES.	ADMISSIONS.														DISCHARGES.						
	Rem'g March 1, '50	March	April	May	June	July	August	September	October	November	December	January	February	Total Admissions	Cured	Relieved	Request	Eloped	Died	Total Discharges	Rem'g March 1, '51
Abscess	1			2	1	1	1	3			1			10	5	1		1	2	9	1
Albumenuria	1													1					1	1	
Amaurosis	1				1									2		1	1			2	
Amenorrhea												1		1		1				1	
Apoplexy													1	1					1	1	
Asthenia	7	2	1	2	2	1		2	4	3	1	4	4	33	25			1	2	28	5
Ascites							1		1	1				3	2				1	3	
Bronchitis	3	2	1		1		1	2		1	3	4		18	11	2		1	1	15	3
Catarrh	3													3	3					3	
Carcinoma						2	1					1		4	2		1		1	4	
Cardiac disease	1	1			1									3	1	1			1	3	
Calculus				1										1	1					1	
Caries						2			1	1	1			5	2				1	3	2
Cholera Asiatic			1	5	11	26	12	1	3	6	3			68	20				48	68	
Colica						2	1							3	3					3	
Colica Pictoneum								1	1					2	2					2	
Convulsions											1			1	1					1	
Cutanei	1			2	2			1			2	1		9	5	2				7	2
Constipation					2					1				3	3					3	
Cystitis		1				2	1	1						5	5					5	
Coxalgia											1			1							1
Diarrhea	7	1	2	3	4	13	21	3	5	3	3	4	1	70	60	2		2	5	69	1
Dysentery				3	1	5	10	7		4		1		31	23	1	1		6	31	
Dyspepsia		1	1	2	2	1		1	2	1	1			12	9		1	2		12	
Epilepsy	1		1				1							3	2		1			3	
Encephalitis	1		2		1		1			2				7	4			1	1	6	1
Encephaloid						1	1							2	1				1	2	
Erysipelas	2	1					3	1	2		1	2	1	13	10			1		11	2
Fevers	5	12	12	8	5	12	23	15	7	7	6	15	13	140	109	1	1	2	21	134	6
Fever, intermittent	14	4	7	7	11	27	29	27	10	9	11	5	5	166	155	3		2	1	161	5
Fistula	1													1	1					1	
Fractures		2	3	1	1	2	1			4	2	1	1	18	14	1			2	17	1
Gelatus	1									1				2	2					2	
Gonorrhea		2	1	4	7	5	2	3		1	2	1		28	24		1	2		27	1
Gastritis					1	3						1		5	4				1	5	
Hepatitis							1	1	1					3	2				1	3	
Hydrops				1					1					2	2					2	
Hydrocele	1						1		1					3	2	1				3	
Hydrothorax							1							1					1	1	
Hysteria								1				1		2	2					2	
Hydrocephalus						2								2					2	2	
Icterus					1				2					3	2					2	1
Irritatio Spinalis	1		1				1							3	2				1	3	
Intussusception							1							1			1			1	
Injuries	8	5	8	3	2	3	6	12	3	6	7	5	2	70	55	6	1	2	2	66	4
Keloides							1							1				1		1	
Luxations							1	1						2	2					2	
Mania	1	1		2	3	1	1				1		2	12	4	3	4			11	1
Mania a potu	1	2	4	2	1	3	2	5	4	4	4	5	3	40	30			1	6	37	3
Metritis						2		1	1					4	2	1	1			4	
Nephritis						1				1				2	2					2	
Neuralgia				1	1	1	1					1		5	4	1				5	
Ophthalmia	5	4	5	3		1	3	2	3	2	1	2	2	33	23	2	1	1		27	6
Orchitis	1				2		2	1						6	5					5	1
Osteo Sarcoma			1					1						2	2					2	
Otitis		1												1	1					1	
Paralysis	1				1				1				2	5		2			2	4	1
Parasites							1							1						1	
Pertussis							1							1	1					1	

(Table continued.)

DISEASES.	ADMISSIONS.													DISCHARGES.					
	Rem'g March 1, '50	March	April	May	June	July	August	September	October	November	December	January	February	Total Admissions	Cured	Relieved	Request	Eloped	Died	Total Discharges
Peritonitis							1		1					2	1				1	
Phlebitis							2							2	1				1	
Phthisis	4	2	5	2	6	3	2	3	1	3	4			35		3	15	2	12	
Pleuritis		1	2		1		1	1	2		1	1		10	6	1		1	1	
Pneumonia	1	1	2		2								1	7	5				1	
Polypus											1			1	1					
Pregnancies		1	1	2			2		1		1	2	2	12	9					
Rheumatism	2	1	1	2	5	2	2	2	2	3	2	3	6	33	17	5	1		2	
Scrofula	2				2	1				4			1	10	4	3				
Sprains				1		2		3						6	6					
Stomatitis				1			1							2	2					
Strictures				1			2							3	3					
Syphilis	10	12	8	5	9	12	8	5	8	6	6	10	3	102	87	5	2	5	1	1
Tumors	1			1									1	3	2					
Tetanus							1				1			2					2	
Ulcers	10	4	6	2	6	2	3	2	3	6	1	4	4	53	43	7			1	
Ulcers of the Uterus					1								1	2		1				
Ustio									1					1					1	
Wounds	3	2	3	1		2	1	1		1	3	3	1	21	17	2				
Total	102	66	79	70	97	143	160	110	72	81	71	79	57	187	757	59	33	28	135	11

SELECTIONS

FROM

FOREIGN AND HOME MEDICAL JOURNALS.

On the Absorption of Alimentary Substances, and the Functions of the Lacteals.—M. Bernard read a memoir on this subject before the Academy of Sciences, Paris, in which he proposed to determine, by direct experiment, the nature of the nutritive principles which are absorbed and conveyed by the chyliferous vessels, in order to ascertain if there really exist any alimentary substances which absolutely escape venous absorption, and consequently avoid passing through the liver before arriving at the lungs.

Alimentary substances submitted to digestion are, in the intestinal canal, finally reduced to three principal substances—the saccharine, the albuminous, and the fatty emulsive; on these M. Bernard has instituted experiments:—

1st. *With regard to the absorption of Sugar by the lacteals.*—On injecting large quantities of sugar into the stomachs of different mammiferæ, it has been found in the blood of the portal vein, while it was absent from the chyle of the thoracic duct at the same time and under the same circumstances; whence it is concluded that sugar, before arriving at the lungs, traverses the liver, where it undergoes a peculiar physiological modification. If a solution of grape sugar be injected into the superficial veins of a dog, it speedily passes off by the urine; on the contrary, if the solution of sugar be injected into the radicles of the portal vein, the sugar is no longer eliminated by the kidneys, but passes into the circulation, and is assimilated in the same manner as if taken into the digestive

canal. Thus it is shown that the absorption of sugar by the portal system is a condition essential to its assimilation, since, if confined to the lacteals, the saccharine principle is abstracted from the influence of the liver, and is diverted directly into the general venous circulation, as takes place when it is injected by the jugular vein.

2d. *As to the absorption of albumen by the Lacteals.*—Albumen injected into the general venous circulation soon appeared in the urine. If injected into the portal vein, it does not then appear in the urine, but is assimilated in the same manner as obtains with sugar.

3d. *Absorption of Fat.*—M. Bernard's previous researches have shown that fatty matters are not capable of admission into the Lacteals, until an emulsion has been formed by the action of the pancreatic juice. Immediately that this emulsion has penetrated the lacteals, their aspect undergoes an entire change; instead of remaining transparent, like other lymphatics of other parts of the body, they assume a milk-white appearance, and owing to the transparency of the coats of these vessels, the course of the fatty matter may be followed from the intestine to the left subclavian vein, where it is diverted into the thoracic duct. It is not necessary that fatty matters should traverse the liver in order to their assimilation. M. Bernard has injected fatty emulsions into the jugular vein, but has not found that substance in the urine.

Thus the products of digestion may be distinguished with reference to absorption into two groups: *e.g.* 1st, fatty and albuminous matter absorbed by the lacteals, passing into the general circulation without having traversed the liver. The last proposition cannot be taken in so absolute a sense as the former, since experiment and microscopical examination demonstrate that fatty matters are absorbed both by the portal system and by the lacteals.—*London Med. Gaz.*—*Am. Jour. Med. Sciences.*

On Iodognosis.—M. Dorvault has published a series of researches on the chemical therapeutical, and medical properties of iodine. To these, as embracing the entire knowledge of all the properties of that substance, he has given the name of iodognosis, *iodoynosie.*

We here submit an abstract of the medical portion of these researches, from the *Gazette Medicale de Paris:*—

Iodine, as a therapeutic agent, according to M. Dorvault, is unimportant; it is to its combination as *iodides* that its medical value is due. Even when introduced alone into the system, its therapeutic effects are to be attributed to its combination with the alkalies which exist in the fluids of the body. Under either circumstances the terms *iodic medication* express the same fact. Iodide of potassium is taken by M. Dorvault as the type of iodides.

Physiological Action of Iodides.—Iodides belong to that class of therapeutic agents to which M. Dorvault gives the name of *chemico-catalytic*, and form its most striking representative. This proposition is founded on the following facts: If the animal fluids (blood, lymph, semen, milk,) or their proteic elements (albumen, fibrin, casein,) be subjected to the action of a solution of iodide of potassium, it will be seen to prevent their coagulation and dissolve them. In producing this effect the salt remains unaltered; it acts, therefore, by virtue of what chemists have called the *catalytic* force. The same may be shown to have obtained when employed in certain pathological cases. The salt may be detected unaltered in the blood or urine, or other secretions.

These facts have been observed by many other investigators, and all have found practically that iodide of potassium promotes secretion, increases the functions of the mucous glands of the alimentary canal, and of the liver, kidneys, skin, pancreas, parotid, etc.

Iodide of potassium is rapidly eliminated from the animal fluids. Dr. Scharlan (of Stettin) found that a patient, to whom he gave 53 grammes daily, eliminated 51 grains by his urine. The five grains lost were accounted for by the elimination of this salt by the saliva, sweat, and tears. Dr. Kramer satisfied himself, from his experiments, that six days sufficed for the complete elimination of this salt after its exhibition during 50 days. The researches of Dr. Marchal, at Vâl de Grace, also prove the rapid passage of iodide of potassium by the urine.

Iodine introduced into the system has been separated by the action of alkalies on the blood.

Special Action of Iodides.—The accidental or consecutive action of iodides has often been mistaken for their primary or efficient action. Some physiologists have considered iodine as a stimulant, others as a contra-stimulant. M. Dorvault observes that neither view expresses the exact truth. He admits a certain degree of general constitutional excitement under its employment; also that, in severe pains of the bones and other tumors, the action of iodine is sedative, by allaying pain. But in both these cases the stimulating and the sedative action are the consequence, not the cause, of the beneficial therapeutic agency of the remedy.

A third opinion, that iodine is alterative, M. Dorvault regards as nearer the true explanation, but as insufficient in fact, as the medicinal influence of the iodides is often seen after the first dose, therein differing from alteratives. M. Dorvault admits, however, the alterative action of some substances in which iodine exists in minute quantities,—*e. g.*, sponge, cod-liver oil, etc.

M. Dorvault also considers the purely chemical theory of the action of iodine as incorrect; his own opinion being, that the medicinal virtue of the iodides consists in their power of dissolving or further liquefying the *humors* of animal bodies, of separating their constituent or proteic elements, and disposing these to the formation of new products, such as coagula, false membranes, and pathological concretions: that the iodine and the potassium united both concur in the production of this result, by a special and peculiar chemico-physiological power which iodides possess of liquefying the fibrine of the blood without destroying the globules; while potash, ammonia, and other substances, dissolve the blood in all its parts.

Therapeutic Action of Iodine. The pathological states in which it is employed.—Goitre, scrofula, syphilis, skin diseases, white swelling, caries of the vertebræ, tabes mensenterica, rickets, phthisis, leucorrhœa, amenorrhœa, and chlorosis, cancer, cachexies, dropsy, poisoning, tumors, rheumatism, various chronic diseases, hypertrophy.—These are the forms of disease in which, M. Dorvault observes, the administration of iodine is indicated.—*Ib.*

THE WESTERN JOURNAL.

THIRD SERIES.—VOL. VII.—NO. V.

LOUISVILLE, MAY 1, 1851.

THE HISTORY OF MEDICAL EDUCATION, ETC.

Dr. Davis, of Chicago, has considered it necessary to respond to the notices of his work, on medical education, which appeared in the New York Journal of Medicine, and in this *Journal*. We did not undertake to review the book of Dr. Davis, but was content with an expression of the judgment we gave, founded on a perusal of the work. Dr. Davis is not pleased with the character of that judgment, but we assure him it was honestly formed, and we do not now find, after reading the rejoinder of Dr. Davis, any reason to retract or modify the opinion we formerly expressed.

We alluded to the representation made by Dr. Davis of the dearth of medical literature, in this country, at a specified period of American history. The New York Journal published a list of American books, which were printed during the blank referred to by Dr. Davis, but Dr. Davis says he had actually quoted from some of these very books. These quotations made the following declaration the more singular: "the medical writings of this period seem to have been confined almost wholly to the pages of the three medical journals which had been established in New York and Philadelphia, and to here and there a pamphlet,

or a paper read before some organized society. Indeed, I have not been able to find a single *volume* on any *branch* of medical science or practice, published by an American physician during the first twenty years after the close of the revolutionary war. And yet, as we have already seen, it was a period in our history which was graced by some of *the noblest and most active minds ever devoted to the cultivation of medical science.* But the art of *mere book making*, which has been brought to such perfection in this our day, was little known to our professional ancestors."

Dr. Davis thinks his meaning should have been "obvious to the most careless reader," and we cheerfully admit that just that kind of a reader might easily have stumbled into the meaning Dr. Davis now gives his language. But we do not belong to the class of readers, upon which Dr. Davis leans for countenance in this matter. We read the language carefully, and we could not then, nor can we now, put any other construction on it than that we have given. We are bound to believe that "Collections for an essay towards a Materia Medica of the United States, by Dr. Barton, commenced in 1798," "Observattions on the causes and cure of remitting bilious fevers," by Dr. Currie," "A treatise on yellow fever, by Dr. Davidge, of Baltimore," "Letters on yellow fever, by Richard Bagley, New York," all published in 1798, and a work "On the origin of pestilential diseases, by Dr. Charles Caldwell," published in 1799, to say nothing of other books, were volumes on some branches of medical science and practice. Dr. Davis seems to think that because he said that the period embraced in his non-book-making time, "was graced with some of the noblest and most active minds ever devoted to the cultivation of medical science," he should have been understood to mean that these active minds were given to book making, when he immediately adds that they were not, and when he prefaces his compliment with the declaration that, he had "not been able to find a single *volume* on any *branch* of medical science or practice, published by an American physician during the first twenty years after the close of the revolutionary war." And Dr. Davis would have careful, as well as "careless readers" to understand him as meaning, that the books referred to had nothing to do with "physiology, midwifery, materia medica, practical medicine, etc." This may do in regions where the mysteries of a fox chase are better understood practically, than we can be supposed to understand them, and we assure Dr. Davis that we are utterly unable to perceive, in any degree whatever, how his explanation relieves him. If he

thinks it helps his cause, we are yet even with him, for we think it does not.

The History of American Medical Education is a grand theme, filled with great results, and some of the brightest triumphs of science, and we should rejoice to see justice done to the noble subject.

Since the preceding remarks were written, we have received the May number of the *Northern Lancet*, containing a series of very impertinent and unjust remarks upon the American medical press. We think that we have enjoyed a good opportunity of knowing the character of the conductors of the medical press in this country, and from our long and tolerably intimate acquaintance with an extensive range of the "humanities" of the times, we declare that we know of no class of persons more thoroughly honest, intelligent, and worthy, than the great mass of the editors of the American Medical Journals. It is seldom that asperities and personalities are indulged in, and we believe there are few medical editors who permit their judgment to be swayed by anything but honest convictions. The utterly disgraceful "caricature and libel" upon the editorial corps, contained in the defence, set forth in the *Northern Lancet*, of Dr. Davis's *History*, needs some apology, since it is without any provocation.

In another part of the model for medical reviewing, contained in the defence referred to, the urbane, polite, and genteel editor of the *Northern Lancet* thus holds forth: "The work (Dr. Davis's *History*) was greedily seized upon by a few of our contemporaries, who, in their criticisms, evidently dictated by animosity and personal feeling, misconstrued the author's intentions," [another Daniel come to judgment!] "and from glancing over one or two pages, inferred the whole, and as it should be expected, the notice turned out to be in perfect accordance with the spirit that presided over it."

After having uttered this string of gratuitous calumnies upon those who noticed *the* History, our amiable confrere of the *Lancet* lustily boasts that he has honesty enough to admire Dr. Davis's book. What a pity he had not some honesty to spare for other purposes!

We thought we dealt mercifully with Dr. Davis's book, and it may be yet found that we did, if we are compelled to prove it. B.

VACCINATION—REVACCINATION, VARIOLA, ETC.

At a recent meeting of the Royal Medical and Chirurgical Society, London, Dr. Webster reported a case of smallpox which occurred the

third time in the same individual, and the last attack proved fatal. This victim to variolous infection was vaccinated at the age of three months. Six years after the vaccination, he and his brother had smallpox. Five years after, the brothers were again attacked with variola, and a third brother, who had been vaccinated, was taken with smallpox during the second visitation of the disease in the family. Twelve years after the second attack, one of the victims of that attack was seized with variola, in India, and died.

Dr. Stewart reported an interesting case of confluent smallpox, which occurred in a patient after a third vaccination.

These cases gave rise to an animated debate, and the general conclusion seemed to be about the same as the one we reached in our recent sketch of smallpox. The opinion of the members of the society, generally, was that vaccination is the safest and most reliable prophylactic against variola. Dr. Gregory endeavored to urge upon the Society his singular statistics, and a notion that after the fifteenth year of vaccination the only protection is in inoculation. This is certainly a very preposterous suggestion, when we reflect upon the number of second and third attacks of smallpox that occur in some persons. Dr. Gregory seems to have almost a mania for the resuscitation of inoculation. B.

PROFESSOR BARTLETT.

This distinguished teacher has resigned the chair he accepted in the New York School last fall. We hope, however, that his valuable talents will not long remain idle, and that his next appointment will prove more agreeable and prosperous than the preceding one did. He is worthy of the highest consideration as a teacher, and we hope to hear soon, that he has a position at once gratifying to him and useful to the profession.

We find the following announcement in the *New Hampshire Journal of Medicine*, for April: "At home changes are being made in professional chairs. Perhaps the most important and the most significant as yet is that Professors Gross and Bartlett leave their chairs in the New York University. This is hardly unexpected by those who are at all acquainted with New York medical polemics—which, by the way, is one of the most curious chapters that we have ever studied. We suspect that it is better understood abroad than the profession in that city are aware." B.

SINAPISMS.

A series of experiments were recently made in France, by Trousseau and Pidoux, for the purpose of ascertaining the best means for applying mustard as a sinapism. The experiments revealed the singular fact that mustard mixed with water is a better combination than mustard and vinegar, or mustard and acetic acid. The experiments showed that the combination of French mustard with acetic acid made the rubefacient action almost inert, but the same result did not obtain when English mustard was used. We think the reason of this is obvious. There is more oil left in the flour of French mustard than in that of the English, the acetic acid combines with the oil, and is thus rendered inert; and the volatile principle is not set free.

The most reliable mustard we have ever found for sinapisms, was the Lexington mustard, during the life of its originator, Nathan Burrowes. The only kind we have ever seen equal to it, is manufactured in this city by Tannehill & McAlister. We never saw it fail, where there was a chance for a sinapism to succeed. We have not tried the relative advantages of a mixture of Tannehill's mustard with warm or cold water, vinegar, or acetic acid, but if any of our friends wish to be miniature martyrs to science, we will try the mustard poultices upon them, and note the effects. B.

REPORT OF THE SANITARY COMMISSION OF MASSACHUSETTS, 1850.

Through the polite attention of our friends Dr. Edward Jarvis, of Dorchester, and Lemuel Shattuck, Esq., of Boston, Mass., we have received a copy of a *Report of a general plan for the promotion of public and personal health, devised, prepared and recommended by the Commissioners appointed under a resolve of the Legislature of Massachusetts, relating to a sanitary survey of the State.* Our readers are aware of the deep interest we feel in everything relating to the subject of this report, and they know how constantly and earnestly we have endeavored to impress upon the public mind, the vast importance of everything promotive of public and personal health. It is the one great theme that should absorb the public mind, and, if we could see the vast regions of the West and South awakened to the truths of sanitary

science, and engaged in putting them into action, we should feel secure of their rapid attainment of prosperity, and permanent possession of it. But while daily experience shows the absolute necessity of a knowledge of sanitary science, years roll on without its attainment, and ignorance and time are building difficulties for the future. The profession which should be foremost in bringing about a reform, plays the sluggard, and the great public sleeps securely until pestilence has it in its jaws, and then we see spasmodic twitchings after sanitary help.

In the midst of this general apathy it is refreshing and consoling to look upon the philanthropic and noble labors of Massachusetts in sanitary reform, and it was fortunate for her, and for the cause of humanity, that she possessed such a man as Lemuel Shattuck, to be placed at the head of a commission for a sanitary survey of the State. No one in Europe or America was gifted with higher qualifications for the work, and this Report is a monument to his philanthropy and intellectual powers, more honorable than the proudest trophies of the warrior. The labors of the Massachusetts Sanitary Commission are a model, which all the States of this Union would do well in copying as speedily as possible.

We shall endeavor to present the readers of this *Journal*, in future numbers, an analysis of the contents of this whole volume, and we hope that the startling truths of this Report will awaken our professional brethren to the necessity of a study of sanitary science. The proudest names in the medicine and surgery of France have devoted themselves to gratuitous sanitary labors for years, and a host of British physicians have imitated the example, and why should American physicians hold back from this great enterprise of philanthropy? We shall certainly do all in our power to awaken the sleeping energies of the profession.

B.

TRANSACTIONS OF THE OHIO STATE MEDICAL SOCIETY, FROM ITS FIRST ORGANIZATION IN 1846, TO THE CLOSE OF ITS LAST SESSION IN 1850, WITH ADDRESSES AND ESSAYS.

We have read the proceedings of this Society with mingled feelings of pleasure and shame—pleasure in the knowledge that the profession, in Ohio, enjoys the means of progress, to be found in an annual convocation of the professional mind from all parts of the State, and shame

for Kentucky that she neither has the enjoyment, nor manifests any solicitude for it.

The Transactions of the Ohio State Medical Society present several points of interest, to which we shall refer at another time. B.

OBITUARY.

Professor John B. Beck departed this life, in the city of New York, on the 9th day of April. He was 57 years of age, and had long enjoyed an enviable position in the medical profession. We learn from the New York Journal of Medicine, that Professor Beck occupied a professorial chair in the College of Physicians and Surgeons, for almost twenty-five years. Of the distinguished ability with which he filled it, the medical profession of the Union are well advised. The profession of the city of New York, especially will feel the loss of Professor Beck, but his death is a calamity to the country.

The *New York Journal of Medicine* promises a biographical memoir of the deceased, in its July number, and we shall endeavor to present our readers, at least a synopsis of it. B.

EPIDEMIC INFLUENCES.

We intended in this number to record the triumphs of sanitary science throughont the world, but have been unable to do so. The triumphs of sanitary science constitute one of the proudest trophies of medical science, and shows the philanthropy, benevolence, and science of the profession in a noble point of view. We hope to be able to make the sketch referred to in our July number. B.

THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY.

EDITORS.

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AND

THEODORE S. BELL, M.D.

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THE

WESTERN JOURNAL

OF

MEDICINE AND SURGERY.

JUNE, 1851.

Art. I.—*On Carbonagogue Medication.* By Lewis Rogers, M. D., Professor of Materia Medica and Therapeutics, in the Medical Department of the University of Louisville.

Animal Chemistry has been diligently engaged, for some years, in exploring the composition and structure of the fluids and solids of the human body, and has developed a variety of truths both novel and interesting to the physiologist. Indeed, so much has been achieved by the varied and searching investigations of the chemist and microscopist, that the physiology of the present day has passed through a revolution so complete, as scarcely to be recognised now as the branch of science passing under that name twenty years ago.

The revolution in physiological doctrines, and the more accurate and refined conceptions now entertained of the structure and functions of the human system when in health, have, to a marked extent, modified the doctrines of pathology, and while expanding, have improved our

knowledge of the phenomena and laws of morbid processes. The crude theories of humoralism and solidism, once so prevalent and so confidently announced, have been succeeded by the development of a great mass of both independent and connected facts, not yet sufficient, it is true, to lead to conclusive and unexceptionable generalizations, but, as the product of cautious and practised inquiry, destined to furnish the materials from which more perfect general principles will be educed, at a period not very remote. At no time in the history of medicine has research been so industriously and accurately prosecuted, and the laborers in the various departments of medical science so richly rewarded by valuable and reliable results.

Correct physiology and correct pathology, form the basis of sound and philosophical therapeutics; without such a basis the practice of medicine is little better than mere empiricism, established upon a vague and uncertain experience, and groping its way, without the guide of laws or principles, to doubtful and often disastrous results.

While physiology and pathology have been advancing with so much rapidity, it is not a little remarkable that therapeutics, to subserve the purposes of which these are alone valuable, except as matters of abstract science, have advanced in a degree by no means commensurate. "While animal chemists and physiologists are daily pointing out the composition of the solids and fluids of the animal economy, it is a matter of great surprise that we so rarely hear of pathologists applying with a view to the lessening disease, the doctrines which the former have established and promulgated." Whilst the physiologist and pathologist of the present day enter very profoundly into the arcana of the special subjects of their investigations, and with the microscope and the implements of chemistry follow up the matters involved in their inquiries to the utmost limits of analysis and synthesis, the

therapeutist is content, for the most part, to deal in indefinite generalities, and to address his remedies to broad and comprehensive indications, the fulfilment of which, in the summary manner usually adopted, will often be found, upon a rigid analysis of the component elements of these indications, to include a contradictory course of medication, one part of which may entirely annul another. The therapeutic application of modern physiological and pathological discovery has, to be sure, been successfully essayed in a few specialties, but as a general truth, it may be confidently asserted, that the greater part of the so-called therapeutic principles are the precepts of a random experience, and not educed from a philosophical consideration of healthy and morbid processes, and the most direct methods of subjecting the latter to the control of the former.

In the treatment of the various forms of fever, and indeed in the treatment of most diseases, both acute and chronic, a leading and controling indication is the restoration of the secretions; such is the common phraseology of most practitioners of medicine, and remedies are variously and vigorously addressed, with the view of attaining this prominent purpose. Now, what is expressed and generally understood by a restoration of the secretions in fever? The skin is hot and unperspirable; the kidneys excrete a diminished amount of urine; the liver, and the glandular and exhalent structures involved in the mucous membrane of the alimentary canal are slow in the effusion of their appropriate fluids; in a word, there is a diminution or arrest of the normal functions of the organs concerned in the important offices of secretion and excretion, and particularly of the latter. This arrest of the healthy excretory processes, while it is probably one of the earliest of the noxious effects of the peculiar poison engendering the fever, becomes often in the progress of the affection, a leading source of difficulty and dan-

ger, by inclosing in the system excrementitious elements, the steady and unfailing elimination of which is now deemed essential to the health of the economy. The general purpose held in view by practitioners in their efforts to restore the secretions is to induce a soft and moist state of the skin, the discharge of a natural or an increased amount of urine, an open state of the bowels, and free bilious evacuations. When the treatment of a case of fever is so managed as to realize these important effects, it is generally successful, and the great end of therapeutics is achieved.

A few years ago, before animal chemistry had occupied the attention of the profession to any great extent, and before the wonderful actions constantly going on in the laboratory of the human body were in some measure revealed, very limited and imperfect ideas were entertained in reference to the important chemical as well as vital offices performed by the several secretions and excretions above enumerated. By the lights of animal chemistry, physicians of the present day are enabled to discern more fully the real purposes of these processes. As regards the skin, a restoration of cutaneous transpiration is now understood to include, not only the effusion of a certain quantity of water, the equalization of a lost balance of the circulation, and a regulation of the animal temperature, but also to involve the very essential elimination of a considerable amount of carbonic acid, of effete nitrogenous principles, and of a variety of organic and inorganic salts, the retention of which is known to be always baneful, and in some inferior animals has been proved by experiment to be fatal in its effects. As regards the restoration of the urinary excretion, the physiological or chemical therapeutics of the present day looks beyond the mere evacuation of a certain number of ounces of an amber-colored fluid, and recognises the important office of this excretion to be, the deportation

from the system of worn-out carbonaceous and nitrogenous elements, the product of secondary assimilation, or returned to the circulation as mal-assimilated or surplus food not appropriated by primary assimilation. According to chemical therapeutics, the restoration of the urinary excretion implies the elimination from the system of water holding in solution the materials above designated, with a variety of salts, the accumulation of which in undue quantity is productive of the most dangerous effects.

While it is the office of the kidneys largely to afford escape to the refuse nitrogen of the system, it is the province of the liver to secure an outlet for the waste carbonaceous matters circulating in the bloodvessels, and deposited there as the product of the metamorphosis of the exhausted tissues, or thrown back as an unappropriated portion of a redundant alimentation. The liver, aided by the lungs, largely depurates the system of its superfluous hydro-carbon; when the one organ is faulty in its action, the other may, to a limited extent, act a supplementary part, and when both fail, disorder and disease are very certainly produced by the presence of effete principles thus denied a ready evacuation. There is no secretion so sedulously watched in the treatment of all forms of disease as this of the liver; its restoration when absent or deficient, its correction when vitiated, its free flow in all stages and conditions of general and local disturbance, are esteemed of more essential importance than all of the other secretions and excretions combined. Popular as well as professional observation attests the correctness of this opinion in a very large number of both acute and chronic affections, yet when the subject is scrutinized by the mind of the chemical therapeutist, and the view is carried beyond the indefinite and summary estimate generally formed of the fluid called bile, to a chemical analysis of its elements, and the very probable purposes subserved by the excretion of the compound

formed of these elements, it can be readily conceived that cases may frequently present themselves in which it may be necessary to retard this function, with the design of preventing a too rapid waste of the elements which it separates. Some illustrations of this necessity will be adverted to in a subsequent part of this paper. Of the entire quantity of bile formed by the liver, a very small proportion only is evacuated by the bowels in healthy states of the system, the greater part being absorbed after it reaches the intestinal canal, and excreted by the lungs in the form of carbonic acid gas. To estimate properly then the benefits to be derived, or the results to flow from a restoration or increase of biliary secretion, it is requisite to be guided somewhat by the lights of animal chemistry, to bear in mind the intimate composition of this fluid, and its probable physiological purposes, and with these, to connect the pathological condition of the fluids and solids, in the case under treatment. It may be that the system is surcharged with carbonaceous matters, or on the other hand, it may be the fact that these have been already unduly wasted, and that a restoration of carbon is far more essential to the cure of the patient, than the restoration of biliary excretion, and a further loss of this essential element of vitalised structures. Whilst the prevalent therapeutics are disposed to prescribe an invariable stimulation of this function, therapeutics, based upon animal chemistry, suggest a cautious discrimination, and resisting the routine adherence to an antiquated practice, regard the hepatic secretion as a composite fluid formed with some definite design, and not as a vague and meaningless production.

Physiological and chemical inquiry informs us that a certain number of gaseous and solid bodies constitute the materials of which the healthy body is composed; these gaseous and solid matters, under the influence of vital action, are arranged in a definite and particular man-

ner, and hold to each other certain fixed and determinate relations, the unbroken preservation of which is essential to the sanity of the organism. The solids and fluids of the body present a uniformity of composition from which there can be only a very slight departure consistently with health; any material disarrangement, increase, or decrease of the gaseous and solid elements from which they are so curiously and wonderfully formed, must necessarily vitiate their original purity, and develop those disturbances of structure and function which constitute disease.

Of the gaseous and solid substances which enter into the composition of all animal structures, none exist in greater abundance, or perform a more important part, than carbon and its compounds. In one form or another, carbon enters into the composition of most of the animal tissues, and constitutes a large element in the various products of destructive metamorphosis of these tissues. In this way, through the medium of the nutritive fluid circulating through every part of the system, this substance is constantly received by, and as constantly expelled from, the body. Its regular reception and its regular expulsion are alike necessary to the healthful processes of the economy. Its undue reception, its too profuse elimination, and its preternatural accumulation are equally obstructive of these processes. The accumulation of carbon in the system, either as the result of too large a supply, or of a tardy action on the part of its proper organs of excretion, does not seem to have had that due weight given to it, in the causation of disease, to which it is probably entitled. Dr. Carpenter, in speaking of those ingredients of the tissues which are no longer in a state of combination, that fits them for their offices in the animal economy, remarks: "To separate these ingredients from the general current of the circulation, and to carry them out of the system, is the great

object of the excretory organs; and it is very evident that the importance of the respective functions of these will vary with the amount of the ingredient which they have to separate, and with the deleterious influence which its retention would exert on the welfare of the system at large. Of all these injurious ingredients, carbonic acid is, without doubt, the one most abundantly introduced into the nutritive fluid; and it is also most deleterious in its effects on the system, if allowed to accumulate."

Toxicologists differ somewhat in opinion as to the precise mode in which carbon exercises its hurtful influences when applied to the human body in the form of carbonic acid gas. Some think that it is altogether negative in its action, producing asphyxia by excluding atmospheric air. Christison and other accurate observers have, however, satisfied themselves, that this gas is endowed with powers positively and essentially poisonous. An atmosphere impregnated with five, or even three per cent of this gas will occasion unpleasant and sometimes fatal effects in a short time. It acts upon the nervous system with its greatest energy and promptitude, through the medium of the lungs, but its influence is not restricted to the pulmonary surface; it will be felt, very speedily and very sensibly, when brought in contact with the mucous membrane of the stomach; and when the external surface of the body is immersed in it for a short time, its characteristic poisonous effects are certainly induced, even though pure atmospheric air be admitted freely to the lungs during such immersion. Other gaseous compounds of carbon, as carbonic oxide, and carburetted hydogen, are also poisonous, though probably not to the same degree. The carbon is no doubt the essential basis of the poison in these several gases, and, as a question of inferential reasoning, it would seem to make very little difference, so far as its effects upon the powers of life are concerned,

whether it be brought to bear upon the system through the lungs, stomach and skin, in a gaseous form, or accumulate gradually there, as a retained excretion, from a failure of the eliminatory organs, or a redundant supply of the materlals from which it is separated. Apart from all reasoning on the subject, there are several states of disease, such as jaundice and ischuria renalis, which are familiar and acknowledged illustrations of the noxous effects of the retention of matters in the system, one of the important elements of which is carbon.

A more correct appreciation of the results likely to flow from the retention of a poison like carbon, in undue quantity in the system, may be formed by a previous reference to the amount normally excreted by a person in health, every twenty-four hours. A robust, healthy adult is supposed, according to the best authorities, to excrete by the lungs, in twenty-four hours, about 3840 grains, or 8 ounces troy, of carbon. The kidneys excrete in the same time about 433 grains of urea, 13 grains of uric acid, and from 50 to 60 grains of coloring matter, all of which will yield, upon analysis, near 120 grains of carbon. The skin excretes about 107 grains of organic matter, according to Seguin, mostly nitrogenous, but containing carbonaceous compounds sufficient in amount to yield 35 grains of carbon. The exact quantity of bile secreted by the liver, in the period of a day, has not been accurately ascertained; some ten or twelve ounces are discharged into the duodenum, but a large and the most essential part of this, the biline, is again absorbed, and carried into the circulation, to subserve other purposes, and probably, by the union of its elements, carbon and hydrogen, with oxygen, to assist in the maintenance of animal heat; a considerable amount of it no doubt escapes by the lungs in the form of carbonic acid and water. It is a well ascertained fact, that a very small proportion of the bile daily elaborated is contained

in the feces passed in a state of health; estimating this amount at about 1 ounce, and we shall have something near 342 grains of carbon evacuated by this channel, in the twenty-four hours. Adding together the quantities thus arrived at, a total of more than 9 ounces of carbon is ascertained to be daily thrown out of the body, by the several most active emunctories. The estimates here given do not correspond exactly with those of Liebig and others, but for the purpose of illustration, they are sufficiently accurate. This carbon has performed its offices in the economy—it is now refuse matter, the product of textural decomposition, and demands a prompt egress from the system—retained, in a simple or compound form, and in progressively accumulating quantities, it becomes endowed with the powers of a poison—pent up in the blood to the extent of one-half, or even one-fourth of the quantity which we have estimated to be daily eliminated, it cannot fail to engender dangerous and fatal disease.

The lungs being, as we have seen, the channels through which much the larger part of the waste carbon of the system is eliminated, it becomes a matter of interest to know, to what extent disease in these structures, and in other parts of the body, increases or lessens the amount thus disposed of. Minute and systematic observation on this point is yet required; the few facts which have been ascertained have only been noted as of physiological interest, no practical application having been made of them, either to pathology or therapeutics.

In the acute eruptive diseases, it has been found that an increased amount of carbonic acid gas is exhaled by the lungs. This fact is readily explicable. In these diseases, there exists an unusual tendency to decomposition in the fluids and solids; metamorphosis of the tissues takes place with uncommon rapidity, and the blood is replete with the disintegrated matters thus forced upon it; the dark color of this fluid, often remarked in such affec-

tions, indicates its surcharged condition. The lungs afford the most convenient and efficient outlet through which a depuration of these products may be effected. In addition to this, one of the offices of the skin is to eliminate carbonic acid; when this tissue becomes the subject of disease, this office must be abridged, to some extent, and an increase of excretory action be thus imposed on other parts. The nervous and vascular excitement necessarily attendant upon this sudden increase of functional activity in the lungs must predispose to, if it do not actually develop morbid action in these organs. In this way, without reference to the peculiar affinity of the specific poison engendering the exanthem, may we account, in some measure, for the well-known proneness to pulmonary complications characterizing some of the diseases of this class.

Cold weather and cold climates cause the exhalation of an increased amount of carbonic acid by the lungs; this results from the increased consumption of the carbonaceous elements of the body necessary to the generation of the requisite amount of animal heat. This increased amount of carbonic acid is mainly extricated through the medium of the respiratory organs, the functional activity of which must be correspondingly increased. In this way, may we partially account for the great preponderance of pulmonary affections in such seasons and such climates. Warm weather and warm climates diminish the functions of the lungs, relieve the necessity for the great elaboration of animal heat, lessen the amount of carbonic acid evolved by these organs, and impose upon the skin and liver the office of expelling the effete carbon of the body. In this way a very rational explanation is afforded of the various cutaneous and hepatic diseases incident to warm climates and warm seasons of the year.

From our knowledge of the additional functional labor

imposed upon the respiratory organs, during the progress of the acute exanthemata, a practical precept of much value in the treatment of these affections may be educed. When a predisposition to pulmonary disease exists, or when acute pulmonary inflammation has been developed, in the course of these affections, the lungs should be relieved, as far as possible, of the onus of eliminating the superabundant carbon, by carbonagogue medication addressed to the liver, to the kidneys, and to other organs that may be forced into the performance of a part of this function. By the vital and *chemical* derivation thus induced, the lungs may be protected, in some degree, from the danger of over-excitement, and the general system at the same time relieved of a deleterious agent. The restoration of the secretions, by medicines severally having an affinity for them, is but another name for the practical principle here indicated.

In chronic diseases of the skin involving a considerable extent of surface, observation has detected the presence of an increased quantity of carbonic acid, in the pulmonary exhalations. By the consequent exaltation of functional activity, irritation, chronic inflammation, or some other form of organic difficulty may be engendered in the lungs; or if disease, or predisposition to disease already exist in these structures, they may fail to perform their supplementary office with success, and if other organs capable of eliminating carbon, do not spontaneously come to the rescue, or be not solicited to do so by appropriate medicines, the system must suffer from the presence of effete and noxious elements. Hence, the utility in such cases of the occasional, and even persistent resort to carbonagogue medication, in some one or more of its forms. On the other hand, it is a generally recognised doctrine, that many cases of chronic skin disease are due primarily to the presence in the blood of excrementitious matters, which have been detained there by a

failure of some of the excreting organs. This functional failure may be resident in the lungs, in the liver, or in the kidneys, more frequently in the two latter than in the former. This excrementitious matter is usually composed of organic as well as inorganic elements, and carbon is very sure to exist as an abundant constituent. External treatment by lotions, baths, ointments, and other similar superficial means is usually impotent in affording relief; the only successful method of cure consists in that which awakens, and persistently maintains, more free action in the great purificative organs. Hence, the well known efficacy, in such forms of disease, of expectorants, diuretics and cholagogues, which in truth relieve, in a great measure, by their power as carbonagogues. What is the real and ultimate curative influence of an expectorant? Its obvious and appreciable and commonly recognised effect is the removal from the surface of the bronchial tubes of various fluids which coat that surface, and obstruct the free ingress of atmospheric air; by promoting the excretion and expulsion of these fluids, the oxygen of the atmosphere readily gains access to the minute vessels of the lungs, combines with the blood, pervades the body, forms carbonic acid with the effete carbon of the system, returns to the lungs, and is discharged through the avenues of its entrance, having effected that important process denominated decarbonization of the blood. We resort to expectorants then, not simply to disgorge the vessels and tubes of the lungs of certain fluids that may be lodged there, but for the higher end, of more thorough aeration and decarbonization of the blood. Under this chemical view of the mode of action of expectorants, they may with great propriety be ranked as carbonagogue remedies. We give diuretics and cholagogues upon similar principles; not simply to evacuate an increased amount of urine and bile, but with the

more radical view of unloading the system of the chemical elements of which these fluids are composed.

In chlorosis and amenorrhea, and during the existence of pregnancy, there is also a well-marked increase in the amount of carbonic acid exhaled by the lungs. From the period of puberty, when menstruation begins, up to the time of the cessation of this function, not more than the normal amount of this gas is eliminated with the expired air, the quantity permanently increasing upon the final arrest of the catamenial flux, and undergoing temporary exaltation whenever any accidental interruption to this function is experienced. These facts would seem to attach something of a depurative character to the monthly evacuation of dark-colored sanguineous fluid from the uterus, and to afford foundation for the idea so prevalent in the popular mind, that this organ relieves the system, from month to month, of impure and redundant principles, the accumulation and retention of which are charged with the causation of countless ills. The idea that the uterus is concerned in the elimination of useless carbon from the system is sustained by other considerations than those connected with the increased amount of carbonic acid thrown off by the lungs, under temporary or permanent suspension of its normal duties. Dr. Butler Lane, in a paper "on Functional Diseases of the Liver associated with Uterine Derangement," advances, and very ingeniously sustains, an opinion of this kind. Dr. Lane, making use of the tables, constructed by Dr. John Reid, of the relative weights of organs, ascertains the important anatomical and physiological facts, that the average weight of the liver in the female is much less than in the male, and that this diminution of the weight of the female liver is particularly marked at the period of menstruating and childbearing, from twenty to thirty years. Availing himself of the analysis made

by Dr. Simon of the portal and hepatic venous blood, as well as of the menstrual fluid, he "conceives an affinity to subsist between the last, and the portal blood, and therefore the probability of an hepatico-uterine consentaneity." In support of this opinion, he refers to the very common occurrence of alvine derangement during the menstrual period, and expresses his belief that "at the approach of the uterine excitement, the function of the liver is performed imperfectly; the arterial blood becomes to some extent impure; that this very impurity is the essence of the peculiar constitutional state that exists; and that it is by means of the uterine secretion the blood undergoes the necessary purification by which the system becomes relieved." He states that there may be an association or antagonism of morbid action between the two organs, in their various disorders, but "it rarely happens that the natural secretions of the liver and uterus are consentaneously in excess, and when such is the case, it chiefly originates in the course of other diseases, and not unfrequently is the result of undue medical influence." According to these views of Dr. Lane, the uterus, besides performing its part in the great office of reproduction, is economically designed by nature to assist in expurgating the female system of refuse carbonaceous matter, a task more exclusively performed by the liver, in the male. This chemical mode of considering the final though partial office of the uterus, when therapeutically applied to failures and vitiations of its function, compels us to rank the class of medicines heretofore denominated emmenagogues, in the same category with cholagogues and expectorants, for they are in truth carbonagogue in their action, if we consider only the composition of the fluid eliminated, without reference to the organ or the monthly periods, through which, and at which the important elimination takes place. This method of considering such medicines may not extend our knowledge of

the precise mode of accomplishing their purpose, nor enable us to administer them with more certainty of effect, yet such a classification greatly simplifies this difficult subject, and brings therapeutics up to the level upon which organic chemistry has placed physiology and pathology. If the great and ultimate purpose of cholitic, expectorant, and emmenagogue medication be, to promote the full and normal decarbonization of the blood, scientific accuracy, if not didactic convenience, will be consulted, by arranging all articles of the materia medica capable of effecting this end, under the one comprehensive class of carbonagogues.

Connected with the vicarious duties which the lungs assume in cases of chlorosis, amenorrhea, and pregnancy, as efferent organs of carbonaceous matter, some useful therapeutic hints suggest themselves, pertaining to the remedial management of such cases. If acute or chronic organic disease exist in the lungs associated with a cessation of function on the part of the uterus, a state of case which often occurs, the pulmonary exhalation of carbonic acid may not be sufficiently augmented to unload the system to the requisite extent. Experimental inquiry has ascertained that when the lungs are suffering from somewhat extensive organic disease, a diminished exhalation of carbonic acid is the consequence. Under such complicated conditions of deranged action, it will become necessary to the relief of the system to address carbonagogue medicines, from time to time, to the other organs capable of performing this species of depuration. Hence, the utility of the occasional administration of the so-called cholagogues, diuretics, and diaphoretics, the benefit of which experience attests. The kidneys, though mainly depurating the blood of its superfluous and waste nitrogenous elements, perform the same office, to a limited extent, as regards the carbonaceous products. Similar remarks are applicable to the skin. By stimulating the

functions of this tissue, by frictions, bathing, and medicinal diaphoretics, increased facility will be afforded to the egress of its gaseous and fluid exhalations. Among these, carbonic acid is constantly present. In this sense, diaphoretics and other remedial means calculated to exalt the functions of the skin must be considered carbonagogue agents. The skin in a state of health has been proven to eliminate a certain quantity of carbon, other organs performing, at the same time, their share of the same office; there is sufficient reason to assume, that, when these latter are crippled in their power, the skin is every way competent to take on an increased and substitutive form of action.

Amenorrhea is a pathological effect dependent upon a variety of causes. It may be associated with a hyperemic or an anemic condition of the general habit exclusively, or one or the other of these constitutional conditions may exist in connection with disease in the uterus and its appendages. A diversity of distressing symptoms, and ultimately of distant complications co-exist with it, products of the original general or local lesion, or dependent upon the suspended function more immediately, and due to a retention of excrementitious principles that hitherto have received a monthly emission from the system. This latter humoral view of the case is the one invariably taken by the patient. She may be the subject of incurable disease in the lungs, in the kidneys, in the heart, or in the liver, and such disease may, beyond all question, have induced secondary lesions in the functions of the sexual system, yet no argument can convince her that the first link in the chain of symptoms does not connect with the uterus. Whilst the intelligent physician will firmly rely on the accuracy of his diagnosis, and direct his treatment in conformity with the initial or radical indications of cure, some regard is justly due to the malign influences which may be exerted by the retention of effete and excrementi-

tious materials. Nature herself often testifies to the value of this intercurrent medication by the spontaneous development of vicarious hemorrhage from the nose, lungs, stomach, and bowels, and even from more superficial parts of the body; and this, too, in cases complicated with the most serious and extensive organic lesions in vital parts. By the timely administration of carbonagogue medicines capable of acting through other and unobstructed outlets of the system, these spontaneous but alarming eruptions may possibly be averted, and the comfort of the patient materially enhanced. An open state of the skin, of the kidneys, and of the liver, with a free access of oxygen secured to the lungs by pure air and exercise, will largely conduce to the ease if not to the cure of such cases.

According to Dr. Lane, menstrual derangement strongly inclines to hepatic disturbances; a reference to statistics establishes the greater proneness of females than males to biliary disease. The same is to some extent true in regard to the respiratory organs. Protracted amenorrhea, dysmenorrhea, and chlorosis are very sure to awaken pulmonary difficulty, particularly if there exist any hereditary proclivity to such affections. Hence the necessity in the treatment of such cases of distributing the efforts of vicarious decarbonization, by medication variously directed to the several organs competent to the service, and of not imposing upon any one organ too heavy a burden.

Pregnancy, or the arrest of menstruation incident to this condition, developes an increased exhalation of carbonic acid by the lungs. Upon the principle that an increase of functional activity generates an increased liability to disease, females during the period of utero-gestation should be more prone to affections of the pulmonary organs. We have not data sufficient to justify a definite judgment on this point, in reference to a large part of the

acute and chronic affections of these organs, but as regards tubercular phthisis, the sentiment of the profession is decidedly adverse to such a conclusion. Pregnancy has long been considered to avert the development and to mitigate the progress of tubercular consumption of the lungs. My own observations, confirmed by the more extended experience of others, induce a doubt of the correctness of the prevalent opinion. Dr. Grisolle, in a paper read before the medical section of the Academy of Medicine of Paris, on the "Influence which Pregnancy and Phthisis Exercise Reciprocally Upon One Another," assumes the very opposite ground. Facts which he has observed induce the following conclusions: that conception is a rare occurrence during the existence of confirmed phthisis; that the first symptoms of tubercular deposits become very often suddenly evident in the course of pregnancy, particularly in the three or four first months; that pregnancy has been repeatedly observed to act as an exciting cause in women predisposed to the organic disease; that the pulmonary affection went through its stages more rapidly with pregnant women than with unimpregnated subjects; and, lastly, that the organic changes appeared to be stayed immediately after delivery had taken place, provided the patient had not been in a very advanced stage of phthisis.

Assuming an increased liability to phthisis during the existence of pregnancy, as a pathological fact sustained alike by speculative considerations and clinical observation, prophylactic measures based upon the special etiology above suggested might have some useful preventive influence upon females known to be tainted with a tubercular predisposition. Vital as well as chemical derangement unquestionably plays an important part in the production of the tubercular diathesis and in the deposition of tubercles; the former, however, is far more inscru-

table in its mode of action and less directly amenable to the influence of remedies.

In acute and chronic organic disease of the lungs, the quantity of carbon eliminated by this channel is sensibly diminished, and this notwithstanding the efforts for relief made by the increased frequency of the respiratory movements. The lungs are designed to afford an interchange of communication between the atmosphere and the blood, by which oxygen is imparted to the latter and carbon to the former. This interchange will be interrupted just in proportion as organic lesion obstructs the ingress of atmospheric air to the extensive recesses of the pulmonary tissue. In acute diseases, the interruption is sudden and violent, gives rise to tumultuous disturbance, and leads to prompt issues. This tumultuous disturbance is largely due to the sudden arrest of sanguineous decarbonization, and is productive of suffering and danger in a degree commensurate with the intensity and duration of this arrest. The case is one of acute poisoning from the occlusion of oxygen and the inclusion of carbon. The various symptoms of local and remote suffering attendant upon acute pulmonary disease arise from topical and general disturbance of the nervous and vascular systems; but with the whole is blended this one dominant and prevailing element, insufficient oxygenation and decarbonization of the blood.

In chronic affections of these organs, which are slowly developed, such as do not seize rudely or violently upon a large extent of breathing surface at once, a train of symptoms, similar in kind but differing in intensity, is developed, and similar ultimate effects are slowly though no less certainly induced. The patient suffers and dies from a deficiency of oxygen and an excess of carbon. The disease may be pleurisy, or pneumonia, or bronchitis, or it may be chronic empyema, or tuberculization, and the signs and symptoms may differ, and the sympathetic

phenomena be infinitely diversified, yet, when they are all analyzed and reduced to their simple elements, with the view of ascertaining in what way they really assail vitality, the humble and familiar chemical conditions, so frequently adverted to, assert their power and are unquestionably entitled to the claim.

The structural lesions in these affections are hurtful only so far as they seriously interfere with the great and indispensable offices of respiration, the oxygenation and decarbonization of the blood. By an obstruction of this process, a poison is retained in the system, by which not only the part primarily involved is injured, but the vitality of every other part either diminished or annulled. Disease may extend from part to part, and from organ to organ, until the entire body seems to be involved, and it is the fashion to explain this progressive invasion of part after part by the vague term of sympathy, but rigid scrutiny will discover that imperfect decarbonization enters as a modifying if not a controlling element of causation.

In the treatment of acute inflammatory affections of the lungs, blood-letting and other antiphlogistic remedies are resorted to with the view of at once arresting inflammatory processes subversive of the functional and structural perfection of the organs. It is not necessary to the present purpose to enter into a consideration of the mode of action of the remedies most successful in the treatment of inflammation; it is sufficient to know that, whilst they achieve the important results aimed at, they are, at the same time, greatly subsidiary to the mitigation of the most dangerous pathological effect of the diseases under treatment. The lancet abstracts blood surcharged not only with fibrin but with other carburetted compounds; mercury possesses not only antiplastic and defibrinizing powers, but it is distinguished for its stimulant influence upon all the secretory and excretory organs, the skin, the kidneys, and very especially the liver, the great office of

which is considered to be the depuration of the blood of its redundant carbon. The purification of the system through these outlets is a point in the treatment of such forms of disease second only to that which looks to the relief of the topical inflammation; if the remedies used for the latter did not happily combine modes of action competent to the former, it would become highly necessary to blend with those of a purely antiphlogistic character, such as are endowed with carbonagogue powers. Indeed, it is a question in the minds of therapeutists, whether the essential action of antiphlogistic remedies does not really consist in their power to hasten the processes of destructive assimilation, by which an increased quantity of disintegrated and exhausted matter is forced for elimination, upon the various excretory organs.

In the remedial management of chronic affections of the lungs, whether plastic or aplastic, considerations of the same kind are deserving of attention. Such affections injure and lead to fatal terminations, by inducing a slow asphyxia, with its attendant train of remote consequences, and the indications of cure call for the joint use of alteratives and entrophics, and those remedies calculated to unload the system of carburetted compounds, the presence of which constitutes the essential principle of asphyxia. By persistent attention to the condition of the skin, by such hygienic and medicinal means as will insure the preservation of healthy action in this extensive tissue, the system may be greatly disembarrassed and the progress of even incurable disease materially retarded. That the skin performs a respiratory function is made evident by the experiments of Fourcroy and Magendie, who found that animals become speedily and fatally asphyxiated, when the surface of their bodies was covered with an impermeable varnish, or enveloped in a caoutchouc dress. In the same manner, by the use of diuretics, and yet more by mercurial and other medicines which exert a decided

cholagogue influence, palliation may be procured, when more radical relief is beyond the reach of art. Science here gives ready explanation to both popular and professional experience, for even patients soon learn the means by which they may secure for themselves at least temporary alleviation.

Between the lungs and the liver there exists a remarkable consentaneousness of function; this is true as regards both the physiology and pathology of the organs. This consentaneousness of action is evinced by phenomena which occur during the whole period of life, but is strikingly and particularly proven by the relative condition of the organs during fetal life, and immediately after respiration has been established. In the fetus, the liver is the decarbonizing organ, and the lungs are quiescent; accordingly, the former organ is very large and abundantly supplied with blood, while the latter are small and furnished only with a sufficient amount of blood for healthy nutrition. As soon as respiration commences, however, and the lungs assume the office of decarbonization, a prompt diminution in the size of the liver and in the quantity of blood circulating through it takes place, while a corresponding augmentation of the size and circulation of the lungs is at once obvious. This interchange of function between the liver and lungs, though more definitely marked in fetal life, is sustained, and displays itself, under special circumstances, in all subsequent periods. These physiological facts afford by analogy very strong confirmation of the opinion entertained by Dr. Butler Lane as to the similarity of function of the uterus and liver in the menstruating female, an opinion founded on the comparative weights of the male and female liver, and the quantity and quality of the blood in the portal, hepatic, and uterine vessels.

When the lungs are the seat of either acute or chronic disease, by which their function is abridged, the liver,

when healthy, takes on increased activity, and a preternatural amount of bile is elaborated. This vicarious elimination of carbonaceous matter is of very constant occurrence. In some cases of great pulmonary embarrassment, as in extensive single or double pneumonia, or in pleurisy with copious effusion, bile is formed in quantities too profuse to find a ready egress through its ordinary channels; in cases of this kind, vomiting of bile may occur, or absorption and a jaundiced state of the entire body may ensue. Jaundice is a very common complication of pulmonary disease; vital chemistry explains, to some extent, the cause of its occurrence. When it complicates acute pleurisy or pneumonia, the compound affection is often denominated bilious pleurisy or bilious pneumonia, and is supposed to occur particularly in habits that have been subjected to the influences of marsh effluvia. It may occur, however, in habits that have never felt any such influences, solely as the result of the conservative physiological laws ever in operation, though it is more likely to arise when the system has been vitiated by the hypothetical cause alluded to.

Again, when the onus of eliminating carbon from the system is devolved upon the liver, by diseases impairing this function in the lungs, it may happen that this organ is not fully competent to the task. Under such circumstances, the vicarious duty must be performed by other more remote organs, and if not fully performed, carburetted compounds must accumulate in the system. Such accumulations do occasionally take place in the liver itself, as well as in other organs, giving rise to fatty degeneration of the parts involved. It is true that fatty degeneration is more an associate of the tubercular diathesis, than of tubercular deposits limited exclusively to the lungs, but in whatever connection occurring, it is an evidence of a defective excretion of the chemical elements of adeps. In default of a sufficient elimination of

these principles through the emunctories especially designed for the purpose, an increased interchange may take place between the atmosphere and the blood, through the medium of the skin, and enough oxygen be introduced to effect the combustion of the retained hydrocarbon. In this way may be explained the persistent and obstinate paroxysms of febrile excitement so constant in some of these affections.

While pulmonary diseases impose upon other organs the duty of eliminating carbon from the system, and often occasion a permanent local or temporary general retention of it, the ultimate effect is to exhaust the tissues of the frame generally, and progressive emaciation is a prominent feature of some of these affections. The disturbed balance of excretory action, the persistent dislocation of physiological function engender, after a time, a morbid consumption of hydro-carbon and other elements of nutrition, and thus bring about the remarkable atrophy of the body. It is in this state of case, that carboniferous medicines, such as naptha and cod-liver oil act with such seeming excellency of effect; in many patients, for a time, arresting the emaciation and hectic fever, and in a few, according to authentic testimony, having even a more radically curative effect. The prevention of emaciation by these remedies is due to the supply of the chemical elements necessary to combustion, and to the formation of fat, while any radical benefit may be attributed to the free introduction of a healthier molecular base of the chyle, by which general nutrition is altered and improved, and plastic are substituted for aplastic deposits.

While imperfect decarbonization of the blood from pulmonary disease entails a large amount of labor and often disease upon the liver, the reverse of the proposition is equally true; protracted, or even temporary "torpor of the liver," or structural disease of any kind is

very sure to awaken disorder of the respiratory system. While diseases, primarily seated in the lungs, arouse hepatic difficulty and its attendant train of dyspeptic symptoms, impaired digestion and biliary derangement are familiar and very constant precursors of pulmonary affections. The disturbances below the diaphragm are supposed to produce disturbances above it, through the agency of sympathy. A patient is said to have a cough or difficulty of breathing from sympathy with a disordered stomach or a deranged liver; such is the unsatisfactory explanation frequently given. The chemical physiology of the organs concerned offers, in part, a more satisfactory solution of this morbid association. A very common and troublesome symptom of hepatic disease, one exceedingly annoying to the patient, and often encountered by the practitioner, is the deep and prolonged inspiratory movement called sighing. This symptom is so marked and distressing in some cases as to approach the character of asthma, and doubtless, when it attains its maximum of intensity, it does constitute one of the forms of this affection. This sighing is not a mere emotional act; the deep inspirations are not mental in their origin; they are produced in obedience to the chemical wants of the blood, and are designed to convey an increased quantity of oxygen to that fluid, by which it may be relieved of the toxic influences of the carbon with which it is surcharged from diminished hepatic activity. This natural curative effort has been imitated by M. Tavignot, in the treatment of a nervous form of disease denominated by the French, migraine. This migraine is not a simple neuralgia of the head, but neuralgia "accompanied by a state of physical and moral prostration, during which the blackest ideas assail the patient. During an attack of this, which from former experience he was led to believe would continue twenty-four hours, M. Tavignot was induced by the hope that this condition of the nervous

centres might result from a stasis of the blood in the sinuses of the brain, or from imperfect hematosis, to take several deep and rapid inspirations; and after a few efforts of this kind, he found himself completely relieved and able to resume his occupation. Other persons, similarly affected, have been in like manner relieved." Dyspeptic sighing is but one of a great number of illustrations that might be given, of what may be termed the chemical sympathy between the liver and the lungs; illustrations that simplify and solve the reciprocal etiology of this numerous class of affections. This chemico-vital pathology is not only more satisfactory in itself, but what is more important, it unfolds therapeutical indications much more definite and precise. Keeping in view the great physiological purposes of the liver and lungs, their common or vicarious relations, the intimate connection between them and the other emunctories of carbonaceous principles, the therapeutist will be able to administer the powerful class of carbonagogue remedies, with a judgment and discrimination unattainable in any other way. The hitherto vague practical generality known as "the restoration of the secretions" assumes thus an intelligible form and a practicable meaning.

It has been very certainly ascertained that the amount of carbonic acid gas exhaled by the lungs is materially influenced by the temperature of the external air; being greatly increased when the temperature is very low, and diminishing as the mercury rises. The necessity for a varying production of animal heat, and the modification of atmospheric density explain this fluctuation. The repair and waste of the tissues remaining unchanged, a hypercarbonised condition of the blood must ensue, under an elevated range of the thermometer, unless this be prevented by an increased functional activity of other organs than the lungs. In warm climates and warm seasons of the year, this increase of function mainly

devolves upon the liver and the skin; increased cutaneous transpiration and hepatic secretion carry off from the system, in high temperatures, the carbonaceous materials which, under opposite circumstances, find egress through the lungs. The hepatic secretion expels these materials in an unoxidized form, and thus lessens the generation of animal heat. Increase of function engenders an increase of predisposition to disease; hence, while pulmonary diseases largely predominate in high latitudes, affections of the liver and other abdominal organs progressively augment as we descend towards the equator. The increase of physiological duty carries with it a greater proneness to pathological states; this is a law of the animal economy to which there are very few, if any, exceptions.

The diseases of the liver incident to warm climates, and growing out of this single cause, are numerous. Simple functional activity may transcend the limits of health, and pass into irritation or the initial stage of inflammation. As a consequence of this organic exaltation, bile may be formed in morbid excess, and bilious diarrhea, or jaundice from redundant secretion, may ensue. A still higher erethism of the organ may lead to a partial, or complete suspension of the function, a result which may directly arise from inordinate excitement, or indirectly, from exhaustion of power by excessive action. Then, there may be inflammation, fibrinous exudation, and suppuration. Such are a few of the acute forms of hepatic disease. As a consequence of more protracted disturbance, there may be developed the several more chronic forms of disease, as hypertrophy, induration, atrophy and other degenerations of structure. Whatever be the form of the hepatic affection, whatever the character, or the name of the organic lesion, the first, the final, and the most essential effect of each and every one is the same, an arrest, or morbid modification of the great and vital offices of the gland.

As was remarked in reference to diseased conditions of the lungs, that, however their nervous, vascular, and nutritive derangements might develop a diversity of symptoms and sympathetic phenomena, and might hence demand a corresponding diversity of therapeutic observances, yet, after all, their radical importance was to be measured by their influence upon the decarbonization of the blood, and that this influence should be a governing element in the treatment; so, in diseases of the liver, the offices of this organ in consuming the melanotic blood-globules and converting them into bile, in other words, in decarbonizing the blood, are entitled to a leading place in all therapeutic considerations. The special peculiarities of the several forms of morbid action possess really no intrinsic importance apart from their influence upon this single physiological function. It is necessary to know, and it is the purpose of pathology and pathological anatomy to disclose, the successive steps by which organic lesions affecting this function are induced; this knowledge is essential to the accurate administration of such therapeutic means as will speedily contribute to the restoration of normal structure and normal function.

Some forms of hepatic disease are remediable, a few irremediable. In the former, during the persistence of the affection, the function of the organ will necessarily be abridged, and symptoms, not only of local suffering will present themselves, but remote parts, and the system at large will feel the joint influence of vital reactions, and retained excrementitious principles. The indications of cure in such cases are of a compound kind; such as look to the relief of the local exigency, and such as have for their object the elimination through unobstructed channels, as the skin, kidneys and lungs, of the retained products of textural metamorphosis. If the case be one of simple inflammation, for example, the lancet, mercury, and other antiphlogistics may be indicated for the topical

lesion; while, for the relief of the poisoned condition of the general system, cholagogues, diaphoretics, diuretics, and even expectorants, may be called into requisition for their carbonagogue powers. By this composite and comprehensive course of medication, all the demands of the case will be fully responded to, and it may often happen that individual substances of the materia medica will combine qualities and powers competent to meet both forms of indication.

In hepatic diseases, as in some others, the conservative efforts of the system often point the path to be pursued, setting up increased and vicarious action in one part, to make excretory restitution for diminished action in another. The lungs, the skin, and the kidneys often spontaneously perform this office, to a limited extent, for the liver.

When there is reason to diagnose an incurable form of hepatic disease, the treatment must necessarily be restricted to palliative remedies; and these will, for the most part, consist of means calculated to allay pain, and other kinds of nervous disturbance, and to promote a compensative amount of proper excretory action. Sedatives, and carbonagogues, both medicinal and hygienic, embrace a large part of the requisite treatment.

There are several of the acute and chronic profluvia of the intestinal canal that are intimately associated with diseased conditions of the liver, and hold towards such disease, the relation of either cause or effect. Such is the fact in reference to diarrhea, dysentery, cholera morbus, and epidemic cholera. In these diseases, with few exceptions, there is a diminished, or suspended condition of the function of the liver, and often of other organs concerned in kindred physiological duties. In some, this impaired functional energy of the carbonaceous depurants of the system is only a secondary result of the disordered states of the intestinal canal, but in a majority of

instances, the functional lesion is primary, the intestinal secondary. The arrest of hepatic secretion occupying the position of the causal disease, in these several affections, it is no difficult matter to render an adequate solution of such sequent results. Conjoined with the cessation of the glandular secretion, there occurs, or exists in the character of cause, an overloaded, or congested condition of the portal veins; this congestion, in its train, superinduces a similar condition of the abdominal veins generally, which, in its turn, awakens morbid irritation in the arterial capillaries of the organs implicated in the congestion, then increased exhalation from the mucous and other surfaces, and finally, inflammation and ulceration The intimate connection between the venous circulation of the liver, and of the kidneys and lungs, leads to a serious interruption of the functions of these latter organs; whilst the well-established relations subsisting between the intestinal mucous membrane and the skin, from similarity of structure and intimate nervous and vascular sympathy, cannot fail to involve, to a serious extent, the sanity of the important offices of this tissue. Thus, besides the more obvious effects resulting from hepatic lesion, expressed by the names of diarrhea, dysentery, and cholera, "there is, at the same time, an interrupton given by it to those chemical changes of the blood, and to the expulsion from it of those noxious and excrementitious principles, which it is one of the purposes of the kidneys, liver, lungs, and skin, severally to effect." In malignant cholera, the entire suspension of the urinary excretion is a familiar fact; whilst the diminished amount of carbonic acid exhaled by the lungs is a phenomenon ascertained by experimental observation, and at once inferable from the great reduction of animal heat. The same abridgment of excretory action must exist in the milder forms of this class of diseases, though to a less appreciable extent.

In diseases thus compounded of local irritations arising from physico-vital disturbances in the portal and abdominal vessels, and of more diffused and general lesions, from the retention of poisonous principles in the blood, the indications of cure are obviously, also, of a compound character.

Retained excrementitious principles may exercise a deleterious influence, not only on the nervous system, but may serve also to maintain the profluvia with which they co-exist. It is the received opinion, that the acute dropsical effusion connected with albuminous nephritis is a result of the irritation engendered in the capillary exhalent vessels by the urea, which the kidneys, in their congested and obstructed condition, are unable to eliminate; disordered or suppressed menstruation leads to vicarious eruptions of blood; the presence of bile in the blood in cases of jaundice, or even a less amount of hepatic failure, induces purpura hemorrhagica, obstinate epistaxis, and other hemorrhages; the poison productive of typhoid fever has been conjectured to cause the characteristic ulceration of Peyer's patches in its passage from the system through these structures; the fetid emanations from decomposing animal matter are very sure to excite intestinal disturbance, as so frequently happens in the dissecting apartments of our medical schools; in the same way, diarrhea, dysentery, and cholera, though mainly dependent upon more direct and efficient causes, may be aggravated and prolonged, in the manner alluded to.

The therapeutic precepts educible from these not altogether speculative pathological considerations, are sufficiently obvious. The restoration of hepatic action by remedies endowed with specific cholagogue powers, or by other remedies appropriate to the relief of the organic lesion leading to lesion of this function; the less radical auxilliary restraint of inordinate intestinal discharges, by opiates and astringents; the prevention and arrest of the

secondary vascular disturbances in the bowels and other parts, recognised under the name of inflammation, by the judicious and timely use of antiphlogistic remedies; and lastly, the development of revulsive and depurative action in the skin, lungs, and kidneys, by agents severally competent to these purposes; these are the remedial means, singly or jointly administered, according to the persistence and violence of the affection, which are indicated by the pathological conditions of such diseases, and sanctioned by the results of well-tested practical application. Therapeutics thus educed from a careful appreciation of all the elements of the diseases in question, while enforcing the necessity of a paramount attention to the first link in the chain of causation, the arrest of the secretory action of the liver and its cause, are wholly opposed to that blind and routine system of practice, hitherto so prevalent, which gave exclusive regard to this single element. These therapeutic principles recognize no such exclusivism. Whilst relying mainly upon those carbonagogue remedies which are known, from long experience, to be generally adequate to the restoration of biliary secretion, they summon to the aid of these, in cases of difficulty and danger, others that are endowed with analogous influences upon other excretory organs. This philosophical mode of medication follows up diseased action from its cause to its remote effects, pervades the whole, and failing either wholly or partially, in its radical efforts, attempts the cure through less direct, and vicarious channels.

The causes, pathology and treatment of the various idiopathic fevers are topics that have occupied the speculation, research, and experimental inquiry of the profession beyond all other topics embraced within the wide range of its investigations. Without presuming to enter this extensive field of doubt and hypothesis, a few plain and well known facts, bearing upon the doctrines of fever,

and at the same time, having reference to the subject-matter of this paper, are worthy of a brief consideration. Fevers have by some been divided into two great classes, according to the supposed sources of the poisons that engender them; these are, the koino-miasmatic, and the idio-miasmatic; the morbific agent, in the former class, being supposed to be in some way connected with vegetable decomposition, in the latter, with the exhalations emanating from animal bodies. They both occur under circumstances that give very reasonable probability to such hypotheses of causation. Carburetted compounds are the most abundant products of vegetable decomposition, while it is equally true that those conditions of the atmosphere most fertile in the production of typhous, and other forms of adynamic fever, are known to be generated under circumstances, which compel the presence of a large amount of such chemical combinations. Paludal effluvia, the tainted air existing in close and ill-ventilated streets and alleys, where large quantities of vegetable matter are permitted to accumulate and decay, both of which must necessarily consist of carbon in some state of combination with oxygen and hydrogen; and human exhalations emanating from the persons of the sick and the healthy, in the confined and filthy habitations of the poor, and into the composition of which carbon cannot fail to mingle, are the several recognized sources of the febrile poisons. These poisons must produce their effects, either by a direct influence upon the nervous expansions found upon the several surfaces of external relation, or by entering the bloodvessels ramifying on these surfaces, and impregnating and vitiating the blood, and through this medium, successively developing their various phenomena. This latter opinion is the one entertained by a large number of the profession, and affords a more complete and satisfactory explanation of many of the phenomena of fever than the former. An atmos-

phere surcharged with a poison into the composition of which carbon largely enters may prove deleterious to the system both directly and indirectly; directly, by being absorbed, and mingling in the current of the circulation, and indirectly, by displacing from the air respired, the amount of oxygen necessary to the elimination of the effete carbon constantly present in the blood as the product of the metamorphosis of the tissues.

Whatever hypothesis be entertained as to the etiology of fever, a prominent and pervading condition attending this affection, in its various forms, is an arrest, or vitiation, of greater or less duration, and greater or less intensity, of the several most important secretory and excretory processes. This arrest or impairment is universally recognized as a potential part of the febrile combination; it constitutes a link in the chain of morbid phenomena, the severance of which generally resolves the difficulty. In what consists its importance? The physiology of these secretory and excretory processes explains, at once, the noxious influences of their pathological aberrations. They are the scavengers of the system, and when they cease their labors, poisonous and polluting accumulations must occur. Of these accumulations, the product of the natural waste of the body, and possibly of the poison of fever itself, carbon constitutes an important, if not the chief element.

The restoration of the secretions and excretions forms a leading purpose of the therapeutist in the treatment of fever. The remedies which he administers have received technical names significant of their supposed powers; they are familiarly known as expectorants, diaphoretics, diuretics, and cholagogues. The chemical therapeutist, penetrating by his analytical inquisitions into the real and final purposes of these apparently diverse excretions, is enabled to condense these classes into one more definite,

and to embrace many, if not most of them, under the comprehensive title of carbonagogue agents.

This view of the purposes of the excretions does not, it is true, cover the entire range of their physiological action; far from it. The kidneys and skin are known to be mainly engaged iu secerning the exhausted nitrogenous elements of the body, but they also separate a large amount of the more poisonous element, carbon. Whilst recognizing, to the fullest extent, the deleterious influences of retained nitrogenous principles, as connected with fever, and other forms of disease, it cannot be considered that an undue prominence has been given to the results flowing from the other more hurtful principle. The most that can be alleged is, that whilst carbon has been assigned its proper place in the history of morbid causation, and its agency insisted on, with some appearance of exclusiveness, nitrogenous etiology has not been fairly appreciated, and the remedies having an influence in the modification and elimination of principles of this kind rather cursorily considered. This is to some extent true. The same may be said in regard to the inorganic or saline elements of the blood, the retention of which unquestionably plays an important part in the production of disease. The pathology and therapeutics connected with the failure of nitrogenous and saline depuration of the blood are extensive topics in themselves, and demand a separate consideration. In the practice of medicine, they cannot be sundered from carbonagogue medication, for remedies having a control over the excretion of carbonaceous elements, often, at the same time, unload the system of increased quantities of the metamorphosed proteine constituents of the body. For this reason, remedial agents can rarely be administered with the single and special purpose of effecting this or the other species of elimination, for they are all more or less

compound in their action; but the theory of their modus operandi may, with advantage, be separately investigated, with the effect of more fully elucidating the part which they severally enact in this composite action.

The kidneys are the organs through which the effete nitrogenous matters of the system are principally expelled. Diuretic medicines are generally supposed to conduce to the more copious and rapid expulsion of such matters. The distinction which Dr. Golding Bird very justly makes in this class of medicines, between those which merely increase the quantity of water evacuated, and those, which while effecting a like increase, also, at the same time, separate a larger amount of the solid constituents of the urine, is one of some interest in this connection. This very marked and constant difference of effect in the different articles of the class has induced Dr. Bird to divide diuretics into the two sub-classes of renal alterants or blood-depurants, and renal hydragogues; in the former subdivision, he places the saline or alkaline diuretics, in the latter, the vegetable substances endowed with the power of stimulating the kidneys. Now, it is a curious and very pertinent fact, that all the salts of the vegetable or organic acids, in their progress through the bloodvessls to the kidneys, undergo decomposition, combine with carbonic acid, and are eliminated as carbonates, by these organs. Further than this, the observation of practitioners of medicine most familiar with the curative influences of the alkaline diuretics discloses the important therapeutic fact, that alkalis given in the form of carbonates are the least efficacious as renal alterants or blood-depurants of any of the class; thus, the carbonates of potash are much less beneficial in this capacity than the tartrate or the acetate. The plain and irresistible inference from this is, that the conversion of the latter into the former, in their transit from the stomach to the kidneys, is in some way connected with their increased

excellency as blood purifiers. Their consumption of the redundant carbon of the blood explains the well-attested advantages connected with the metamorphosis, and fairly entitles this portion of the class of diuretics to be ranked as carbonagogue agents.

It has been stated that remedies very rarely evince a power exclusively limited to one excretory organ; it is much more commonly true, that more than one excretion is increased, by agents endowed with well marked energy of action. This various capability admits of several explanations, but there are none more satisfactory or ingenious than the physiological one adduced by Dr. Simon. He assumes as an unquestioned fact that the various excretions are merely eliminated by their appropriate organs and not elaborated by them; that they pre-exist in the blood as products of the decomposition and decay of the body "and have their preordained outlets, and so fast as they arise, become evolved; each, as it were, at its own pole of a galvanic battery. I know nothing better to compare this process with than the phenomena of galvanic decomposition: you see the blood distributed with uniform qualities throughout the whole area of the circulation, and you see the products of its decomposition appearing with their characteristic signs at the liver, the kidneys, the skin; just as when you plunge the wires of your battery into a trough of water, you get oxygen evolved at one pole, and hydrogen at the other, while the intermediate material remains apparently unchanged. And to apply that analogy somewhat further, I would point out this for your notice; as you are quite sure in decomposing water, that for every volume of hydrogen at one pole, there must be a corresponding half volume of oxygen at the other,—as you are quite sure that, if the gas be not evolved, it must have spent itself oxidising the metal of that opposite wire, so with the manifestations of secretion. You cannot deal with them singly;

if the essential ingredients of urine, bile, or sweat, be formed in excess, you are quite sure that certain other ingredients *complementary* to them must have been formed in excess likewise. Supposing for a moment, that the liver and the kidney were the only organs to be considered, it would be a chemical impossibility for the blood to furnish material for one of these glands, without likewise evolving, as a necessary residue of that process, the characteristic elements of the other secretion. As an obvious illustration of this, I may cite an interesting observation by Dr. Bence Jones, respecting the digestive process: when much acid was secreted by the stomach, the urine was found to be alkaline: the excess of acid in the stomach was hydro-chloric, and the free alkali in the urine was fixed alkali and not ammonia; in extreme cases, the alkalinity lasted for four hours; as the free acid was absorbed from the stomach, the urine became acid; and this reaction increased, until it affected litmus paper intensely." According to this very clear and scientific exposition of the mutual dependence of the several excretions and secretions, the development of one necessarily involves the complementary development of the others. Extending this exposition beyond physiological states of the system to conditions of disease, and the remedial means requisite to subvert them, there is no reason to doubt that the principle announced will hold equally good. Upon this hypothesis of excretory action, and the farther very reasonable hypothesis, that the presence in the blood, of matters requiring elimination is often alone sufficient to rouse the proper organs to increased effort, without the aid of extrinsic influences, it may be fairly inferred that carbonagogue medicines, besides their direct action as depuratives of the effete carbonaceous matters of the blood, will also indirectly but effectively contribute to the expulsion of useless nitrogenous elements.

In the treatment of disease generally, and particularly of acute febrile disease, the restoration of the secretions, either by medication, or by the critical efforts of the system, is usually attended by a cotemporaneous mitigation of the most threatening symptoms. The establishment of free biliary secretion is esteemed especially curative. When febrile excitement is inordinate, and animal heat is largely generated, an important chemical indication of cure is fulfilled by the elimination of the carbonaceous constituents of the system, in the unoxidized form in which they exist in bile; by promoting this free evacuation without the action of oxygen, febrile heat may be very materially controlled. Hence the great value of that variety of carbonagogue medicines known as cholagogues, in the treatment of such diseases. But, there are some forms of febrile disease, and stages or periods in all forms, occasionally, in which a leading and vital indication is, to sustain animal heat. This important purpose will certainly be frustrated if the physiological functions of the liver be unduly stimulated, and cholagogue remedies be indiscriminately administered. In cases of this nature, it would be well, were it possible, to restrain biliary action, instead of promoting it; but as we possess no remedies that are known to be anti-cholagogue in their action, the same end may probably be attained by arresting the peristaltic movements of the bowels by opiates and other sedatives, so that resorption of bile may take place from the gall-bladder, ducts, and intestinal canal, the constituents of which, combining elsewhere with oxygen, will produce the desired result. The sudden arrest of what is termed bilious diarrhea is very sure to be followed by febrile excitement, and this is the chemical rationale of the sequence. On the same principle partly, no doubt, opium forms one of the most reliable stimulants in low forms of fever, and other exhausted states of the system.

Experimental inquiry has furnished some approximation to an accurate estimate of the average amount of carbon excreted in its several forms, by the healthy adult, in each diurnal period. A brief statement of the details and sum total of the amount thus estimated has been already given. Much, however, yet remains to be ascertained, before such estimate can be deemed sufficiently perfect, to be confidently relied on, for practical purposes.

Reference has also been made to a few facts or observations connected with the increase and diminution of carbonaceous excretion, by the different emunctories of this substance, when modified in their structure and functions by disease. In this field of research, very little has been attempted, and still less has been attained. The important branch of pathological investigation having reference to the precise amount of carbon thrown out by the skin, the lungs and the liver, in the various diseases of these organs, or in the various more general diseases, is yet almost wholly unexplored, and remains to reward the labors of future observers with a harvest of most valuable information. There are intrinsic difficulties in the nature of the subject, which, perhaps, no ingenuity, or nicety of experimental manipulation can wholly overcome; yet, certainly, a closer approximation to a correct ascertainment of some of the most important modifications of this function by diseased action may be realized, than has thus far been secured. The difficulties to be surmounted in regard to the skin and liver, are greater than in regard to the lungs; they must be obviously greater in acute and severe forms of disease, than in chronic ones; in reference to the kidneys, very accurate information is readily accessible, owing to the facility with which the secretion of these glands may be obtained, in a state of purity; for this reason, this special department of pathological inquiry has already been sufficiently de-

veloped, to afford to therapeutics the most invaluable aid.

Correct chemical pathology of the kind just adverted to, is an essential and fundamental element of successful therapeutics. But, besides this, there is something equally indispensable, a precise knowledge of the influence of medicines upon carbonaceous depuration. We may discover that certain diseases are invariably characterized by an increased or diminished evolution of carbon, or by a transposition of the office from one organ to another, and yet, our efforts to correct the special aberration will be wholly impotent, without the aid of carbonagogue remedies, the powers of which have been definitely and clearly ascertained. Practical medicine demands for its successful prosecution, the possession of means of known and well ascertained powers, capable of being applied, with directness and certainty, to morbid conditions equally well ascertained. In this way only, can an approach be made to specific medication, so confidently expected by the patient, and so little attainable by the practitioner. Mere general statements about the action of medicines, such as we find in medical works, for the most part, are not sufficiently precise; their broad and indeterminate generality robs them of definite practical utility, and unfits them to fulfil the more delicate indications of disease.

Experimental inquiry of an accurate character has been prosecuted, to a limited extent, in reference to the class of agents discussed in this paper; a cursory review of some of the results of this inquiry in regard to a few medicines may not be uninteresting.

The opinion almost universally entertained as to the leading action of calomel in large and purgative doses is, that it possesses very certain powers as a cholagogue. The green color of the alvine evacuations so constantly ensuing upon the free administration of this remedy, has,

among other things, given rise to this prevalent opinion. Experiments and chemical analyses conducted by a number of very impartial observers would seem, however, to throw some doubt upon the question, whether calomel does really promote the expulsion of the biliary secretion. The most competent of French authorities, Trousseau and Pidoux, think such action but little probable. Dr. Franz Simon and M. Mialhe, found, after large doses of calomel, a great quantity of bile and biliverdine. Dr. Golding Bird and Professor Schonbein, explain the green color of the dejections, not by the presence of an increased quantity of bile, but by an alteration of the hematosine. Dr. John Simon entertains opinions somewhat peculiar and original, in reference to the influence of all medicines upon the organs of excretion. He thinks that particular medicines increase the functions of particular organs, not because they have any special affinity for those organs, but for the reason, that by their catalytic action upon the blood, they evolve from this fluid a larger proportion of those materials which naturally find an exit from the system through such organs; he thinks that medicines which stimulate the excretory processes do so, by stimulating "that metamorphosis of their material which sooner or later furnishes the elements of discharge; that their best stimulants are their own characteristic excretions; that if these exist in the blood, no extraneous stimulation can be so effective as they, for exciting the organ to which they belong; that if they do not exist in the blood, no special stimulant of the organ which ought to evolve them can do more, even in its highest doses, than bring away from that organ the results of an immature excretory process, admixed with those of inflammatory excitement." With this view of the mode of all excretory development, he has reason for believing that calomel and other mercurial preparations may augment not only the hepatic, but several other

secretions, by accelerating the waste of the tissues, and of the blood, and thus furnishing the materials essential to their elaboration. For the purpose of still further determining this important and mooted question of therapeutics, Dr. Michea instituted a series of accurate chemical analyses, the results of which are embodied in an interesting paper in L'Union Medicale. He analysed "1st. the spontaneous alvine dejections of healthy men; 2nd. the same substance, of a more or less green color, from men affected with gastro-intestinal inflammation; 3rd. the same resulting from various doses of calomel; 4th. evacuations produced by neutral salts and resinous purgatives." The conclusions fairly deducible from these analyses are the following; 1st. calomel acts in a special and direct manner on the liver; this salt occasions alvine evacuations of a peculiar color, due to an excess of actual bile, as shown by the action of nitric acid, which points to the presence of its coloring matter (biliverdine) by change of coloration, and of its albumen, by precipitating the latter. 2nd. This influence of calomel upon the biliary secretion is not constant. It varies according to certain conditions and circumstances. 3rd. The green evacuations produced by calomel are more frequent with men than women. 4th. These evacuations have a peculiar consistence, viz., a viscous liquidity, somewhat like oil, or white of eggs beaten together. 5th. In some affections of the intestinal canal, an excess of bile, to be detected by re-agents, may be found in the evacuations. 6th. Spontaneous alvine evacuations in healthy people are quite free from an excess of bile. 7th. Neutral salts and resinous purgatives exercise no direct or special influence on the liver. The alvine dejections which they produce, contain no excess of bile, remaining unaltered by nitric acid and heat." These experiments, fortified by others equally entitled to respect, conjoined with the unquestionable curative influences of the remedy, in morbid states of

the liver, and in more general diseases in which hepatic disturbance is a prominent symptom, seem to place the powers of calomel as a carbonagogue, beyond all reasonable cavil. As such, it may be confidently relied on, proper regard being had to the modifying conditions and circumstances alluded to by Dr. Michea.

Notwithstanding the statement of Dr. Michea that resinous purgatives are not at all cholagogue, aloes enjoys this reputation with the profession generally, and with some observers who have directed their attention very carefully to its precise mode of action. Among these may be mentioned the curious researches of Dr. Wedekind, which induce the conviction that this article does not act directly upon the intestines, but is carried by the absorbents to the liver, the function of which it specially augments. He finds proof of this mode of action in the slowness of its effects, in the nature of the evacuations, which are bilious and have a special odor, and in the remarkable fact that, when taken in the form of enema, aloes does not irritate the lower bowels more than a like quantity of simple water, but, nevertheless, operates quite actively some eight or ten hours afterward, when absorption and its effect upon the liver have taken place.

A series of very accurate and elaborate experiments conducted by Dr. Boeker, an account of which is given in the second volume of his "Beitraege zur Heilkunde," and a synopsis published in the London Lancet for November 1850, having special reference to the real effect of medicines, according to the views presented in this essay, is worthy of attentive consideration. This consideration is due to the fact that the method adopted by him must lead to an increased certainty and simplicity of therapeutic principles, to a more accurate knowledge of the true and ultimate action of individual remedies, and to the prosecution of further experiment in the same line of inquiry. Dr. Boeker has, as yet, investigated in his peculiar way

only a few remedies; to ascertain the action of these, he subjected himself as well as a large number of patients, to their repeated influence; a condensed account of the results elicited will fitly close what we have at present to say upon the subject of carbonagogue medicines.

The senega snake-root, in the form of decoction, is the first article in the list of those submitted to examination. The urine passed after the free use of this decoction compared with that evacuated when the medicine had not been used, indicated a slight increase in the quantity of urea, uric acid, the phospliates, volatile salts, and extractive matters; the increase of uric acid was especially marked. By resolving the urea and uric acid into their chemical elements, the precise extent to which the administration of senega increases the elimination of carbon and nitrogen by the kidneys may be ascertained.

An examination of the pulmonary exhalations disclosed the interesting fact that the amount of carbonic acid gas expired, during the use of the decoction, was strikingly augmented, while the volume and density of the exhaled air were also greater. In eight hundred examinations, Dr. Boeker found the frequency of the pulse diminished, and this always in proportion to the increase in the exhalation of the carbonic acid. After giving the details of his examination of the blood in a number of cases, by the microscope and by chemical analysis, he adds, "as the general result of his examinations, the decoction of senega-root especially influences, that is, increases the exhalation of carbonic acid gas; thereby it increases the consumption of blood-globules, and likewise the activity of the mucous membrane of the lungs. According to these results, he recommends the administration of senega in diseases which are founded on a hyper-carbonized or melanotic state of the blood." The inferences deduced from these experiments in regard to the physiological action of senega singularly harmonize with its well-established

therapeutic influences, in certain morbid conditions of the system. Experience strongly attests its value in certain stages of sub-acute and chronic affections of the mucous membrane of the lungs. It is vaguely called a stimulating expectorant; its real and essential mode of action receives a more satisfactory explanation, from the accurate observations of Dr. Boeker.

Senega is also esteemed by some eminent American practitioners a very valuable emmenagogue. Admitting the hypothesis of Dr. Lane, that one of the offices of the uterus is to discharge the effete carbon of the system, and that in amenorhea this substance accumulates in undue and deleterious quantity, inducing a hyper-carbonized condition of the blood, we can readily comprehend how senega may prove serviceable as a carbonagogue, certainly increasing the elimination of carbon by the lungs, and probably establishing in the exhaling vessels of the lining membrane of the uterus an increased energy of action, analogous to that which it produces in the mucous membrane of the lungs.

The results procured by Dr. Boeker under the administration of colchicum, in the form of the tincture of the seeds, are exceedingly interesting. The solid matters of the urine, including the urea, uric acid, and the salts were diminished in amount; he could not discover any diuretic effect from the remedy. This result is opposed to the opinion generally entertained as to the action of colchicum, and is accounted for by Dr. Boeker, by the increased action of the bowels. The carbonic acid gas exhaled by the lungs was, at first, slightly increased, but decreased, in a remarkable manner, after the remedy had been exhibited for a few days. This decrease was cotemporaneous with a marked augmentation of the secretion of bile, and was considered by Dr. Boeker to be due to this cause. The quantity of melanotic blood-globules was diminished, the increased secretion of bile following, or giving rise to their

destruction, in the hepatic system. "It results generally from Dr. Boeker's examination that in the beginning of its use, the tincture of colchicum increased the exhalations of the lungs and the skin, and the secretion of the liver; but, by a few days of continued use, the effect on the secretion of bile becomes more apparent, and ultimately causes a diminution of the exhalation of carbonic acid from the lungs." With this clearly defined knowledge of the leading modes of action of colchicum, its therapeutic applications as a carbonagogue remedy may be directed with more precision than heretofore.

During the administration of belladonna in the quantity of one and a half grains in the twenty-four hours, most of the solid matters of the urine were increased, except the uric acid and the non-combustible salts. This remedy is therefore promotive of the destructive assimilation of the plasma of the blood. In the earlier periods of its exhibition, an increased amount of carbonic acid gas was exhaled by the lungs; but, when continued for some days in full doses, this exhalation diminished, while the secretion of bile and alvine evacuations were simultaneously much more free. "From the analyses and microscopical observations of the blood, it became evident that the quantity of melanotic blood-globules and of solid matters of the blood decreased, a result which is quite in accordance with those elicited from the examinations of urine and exhaled air. Dr. Boeker adds, that the use of belladonna promotes the secretion of the bile, and he observed an increase in the alvine evacuations nine times out of ten cases during the administration."

The amount of the solid constituents of the urine was slightly increased, during the exhibition of the tartrate of antimony and potash. The proportion of carbonic acid gas exhaled by the lungs was greater than natural in all of the examinations, the inspirations less frequent, and the pulse slower. The blood analysed and microscopi-

cally examined displayed always a loss of melanotic blood-globules, after the use of this preparation. "As the general result of these observations, the author supposes that the potassio-tartrate of antimony first influences the blood, and thence causes many functional alterations, especially of the stomach, liver, pancreas, &c.

Sulphur was found to induce only a very small increase of the solid constituents of the urine. The exhalation of carbonic acid gas by the lungs was, however, remarkably augmented; this effect was produced when the medicine was administered in moderate doses; when given in large doses for some time, a decreased exhalation was observed, corresponding with an increased secretion of the bile. "The quantity of melanotic blood-globules diminishes in the same proportion as the exhalation of carbonic acid increases, and generally it is observed that a proportionate decrease takes place with respect to the solid substances of the blood, the serum, the albumen, the fat, the fibrin, the blood-globules and the crassamentum. These results of examinations as to the effect of sulphur agree very well with those obtained in the practice of physic and known to every practitioner."

Observations were made by Dr. Boeker upon the intimate mode of action of several other remedies, and with very analogous results; those already adduced are sufficient in number and character to serve as illustrations of the proper method of investigating the essential action of medicines, and at the same time, of carbonagogue agents.

ART. II.—*Aristotle and Theophrastus.* Translated from the French of M. Cap. By W. H. COBB, M.D., of Louisville, Ky.

Aristotle was born at Stagira, about the end of the fourth century before Christ. His father, Nicomachus, was physician to Amyntas, father of Philip, King of Macedon, and claimed to be descended from Machaon, son of Æsculapius. Left an orphan at a tender age, Aristotle was raised by his teacher, Proxenus. His education was conducted with zeal and ability, which, however, did not hinder the young pupil from rapidly squandering his patrimony. He then became a soldier, and returned to Athens, where, deprived of his resources, he betook himself to selling medicine about the public places, and thus reaped the advantages of the medical knowledge acquired from his father and preceptor. Truly it is not for us, as did Epicurus, to reproach Aristotle with having followed the occupation of an apothecary or root-gatherer. Theophrastus remarks that a large number of physicians and estimable men devoted themselves to the study of plants, and drew thence many useful medicinal agents. Who knows that it were not, while engaged in these researches, that Aristotle acquired the taste, and later the genius for natural history?

It was at this same epoch that Plato opened at Athens his celebrated school of philosophy. From that time and during the space of almost twenty years, Aristotle became one of his most assiduous pupils. He himself opened a school, in which he contended with Socrates for the palm as a philosopher and an orator. Already had he devoted himself to philosophy, eloquence, and natural history, and his reputation had attained such a pitch that Philip of Macedon, a short time after the birth of Alexander, wrote to him the following celebrated letter: "Philip, King of

Macedon, to Aristotle, greeting: Know that there is born unto me a son; I thank the gods, not so much for having given him unto me, as for having brought him into this world during the time of Aristotle. I hope you will make him worthy to succeed me and to command the Macedonians." Some time after the death of Plato, the Athenians, having declared war against Philip, he betook himself to Atarmé, of which his friend Hermeas was governor. When his friend perished by the treason and cruelty of Artaxerxes, the philosopher immortalized his memory by a beautiful piece of poetry, raised for him a tomb, and espoused Pythais, his sister. About the same period, Philip called him to his court and entrusted him with the education of Alexander, then thirteen years of age.

The master and pupil passed together many years, in their retreat in a country named Nympheum, near Miéza. Philosophy, belle lettres, and the arts, the physical and natural sciences, and even medicine entered into the plan of his education. When Philip had perished by the knife of the assassin (336 years before Christ), Aristotle remained at court up to the time, when Alexander carried the war into Asia. By many it is pretended that he accompanied him in his first expeditions, but he hastened to return to Athens, where he instituted the Lyceum, and founded his new school of philosophy. After the death of Alexander, Aristotle was attacked by certain rival philosophers and fanatics, who accused him of impiety. He imagined that he ought not to maintain the controversy, and to save the Athenians, as he said, a new attack upon philosophy, he retired to the isle of Eubea, where he died at the age of 63 years. The variety, or rather the universality, of knowledge which characterises the writings of Aristotle, renders peculiarly difficult the task of presenting even a simple analysis of the works of this eminent man. Nevertheless, as we are to consider him mere-

ly with a view to the impulse which he was known to have imparted to physics and natural history, we will endeavor to confine ourselves to the limits which our subject prescribes.

Physics was, at this time, an inherent constituent of philosophy, of which it formed one of the principal branches. Aristotle, a pupil of Plato, adopted for a long time the doctrines of the Platonic school; but his more methodical and less impulsive nature was always satisfied with hypotheses, even of the most ingenious character, when not founded upon the reality of the phenomena presented; he perceived the necessity of opening for himself a new path, by giving to science a more solid groundwork, and he did not hesitate to forsake the doctrine of his master and to profit by his errors.

The philosophy of Plato evidently resembles that of Pythagoras. His system, that of skepticism, rests upon doubt of everything in nature. Aristotle, on the contrary, establishes as a rule that all knowledge acquired by our senses when properly directed, should be regarded as certain, and that nothing can be taken cognizance of by the mind, except through the medium of the senses. Plato and Aristotle, we see, are the chief of the two great parties which have divided philosophers from antiquity up to the present period. The one attributed to our ideas an existence independent of the testimony of our senses, and pretended to determine from the definition of things as to their real nature; the other affirmed that our ideas have their origin in observation and experience, and are only born or develope themselves by abstraction. In these two rival camps, are ranged successively the philosophers of all ages. With the followers of Plato, the idealists and realists; with the peripatetics, the nominalists and empirics. In our days the ideologists as yet cling to the system of Plato, while those who cultivate the physical sciences acknowledge that they are indebted

to the system of Aristotle for all they know positively about things in nature. In this point of view, Lock and Newton may be regarded as the chiefs of the modern school of peripatetics. The Italian school attributed to the elementary atoms, a definite form, which however did not rest upon a real base. Aristotle did not acknowledge the existence of this hypothetical figure thus given to the primitive particles of matter. While he admitted the four elements of Empedocles and Hippocrates, he added to them a fifth, which he called Ether, an immaterial principle, which he supposed to be perpetually in motion around the earth, considered as a common centre. This is the first idea of the system of whirlwinds. Like Empedocles, he resolved bodies into a number of elements; but he believed that even while in a state of combination, they possessed the original properties of the principles composing them. Finally, he attributed to the influence of the earth, as the heaviest of the elements, the tendency recognized in bodies to move towards a common centre, and to fire as the lightest, and in view of its radiation from the centre towards the circumference, all tendency contrary to that which we term gravity. Do we not perceive even here the germ of the theory of gravitation, and of the expansive power of heat?

Hippocrates had demonstrated that experience is the only means of arriving at, in science, certain results. Upon this principle Aristotle laid the foundation of his new philososhy; but, to make an application of it, he must discover a surer route than that trodden by the philosophers who preceded him. See by what a train of reasoning he attained this route. The soul acquires no knowledge without the intervention of the senses, whose office it is to put in communication with external objects. From the facts thus acquired, are framed the opinions which constitute the sciences. We must then commence by observing bodies in nature, and the phenomena apper-

taining to them; but the senses being subject to error, the mind has need of rules to govern it in the midst of the impressions which it perceives; hence the necessity of subjecting the senses to a proper method of observation, and of directing the mind to those processes of reasoning which render error impossible. This last operation constitutes a branch entirely different from philosophy, of which Aristotle may be considered the founder and which bears the name of Logic. These starting points once established, the philosopher of Stagira conceived the project of constructing upon a new plan, the entire edifice of science. The basis of this edifice should be the history of nature. The first thing to be accomplished, was to assemble the material for the researches which belong to it; before the time of Aristotle these materials were but few. The preceptor of Alexander taught his pupil that the most brilliant trophies of his conquest would be to collect the natural productions of the countries, into which he carried his arms, to subserve the progress of natural history. His glorious expedition having opened to the Greeks the gates of India, Persia and Egypt, and having multiplied their relations with the East, the young conqueror collected at a great expense, throughout all the countries he had subdued, the natural productions, but more especially the animals which inhabit them, and sent them to Aristotle. According to the testimony of Pliny, many thousands of persons were charged with collecting these objects, and we are assured that enormous sums (about three millions of our currency) were expended upon them. Thus Aristotle found himself placed in the most favorable circumstances for enriching natural history by a crowd of discoveries.

The history of animals is that branch of natural history which owes most to the works of Aristotle, that which he created, so to speak, and to which he devoted himself

with the most perseverance and success. Before him, this science did not exist. In ancient Greece, zoology was less a subject of study for philosophers than for artists, who in it sought for symbols and emblems, and represented certain divinities under the figure of animals consecrated to them. Democritus, Empedocles and certain other anatomists had studied a small number of beings, in an isolated point of view, but they had considered their nature merely in a practical manner, whereas Aristotle laid the foundation of a general and complete science. Not only did he penetrate into the details of zoology but he considered it as a whole, in an elevated point of view, and made it rather the history of the animal kingdom than that of an individual species; he classified the facts as observed, following the different organs and their functions, and by comparing them one with another, he created the science of comparative anatomy. Besides the regular researches and numerous observations peculiar to himself, he applied himself to refuting a crowd of prejudices relative to natural history; by this, I do not mean that he never committed any error himself, but that it should induce us the more readily to pardon them in him, although he has sometimes been reproached with a want of method, yet it is certain that he is the first who introduced order and shed light abroad among the numerous objects which he studied. According to Cuvier, the principal divisions which he established in the animal kingdom are recognized even in our day, and he has pointed out a number to which we have lately retnrned, after having very improperly discarded them. Let us add to this homage, rendered to Aristotle by one of our greatest naturalists, that of Buffon, "I do not believe,' says he, 'it would be possible to reduce to a smaller number of terms, all we have to say upon this subject." It required a genius like his, to preserve as much order and perspicuity. This work appears to my eyes as a

table of information collected, with the greatest care, from many thousands of works filled with descriptions and observations of every variety. It is the most scientific abridgement ever yet made, and even when we take it for granted that Aristotle borrowed from the books of his time what he put in his own, the plan of the work, his distribution, the choice of the examples, the justness of his comparisons, a certain turn in his ideas, which I should call the philosophical character, do not permit us to doubt for a moment that he himself was far richer than those from whom he borrowed.

Aristotle had written upon plants, two works entitled the "Theory of vegetables," which have not descended to us. The study of plants having been the object of his first labors, it is evident he had no opportunity of making, in the vegetable kingdom, the useful discoveries which his pupil Theophrastus afterwards collected. Linnæus has considered him a botanist, in dedicating to him, under the name of Aristotelia, an elegant shrub growing in Chiil. Aristotle was impressed with the idea that the whole race of natural beings constitutes an uninterupted line, progressive from the simple to the compound, and even that this series passes from inanimate beings to vegetables and animals. He compared with plants certain marine animals, and insects, from which it is possible to remove many members without rendering life extinct. He thought, according to the doctrines of the day, that vegetables were warm and dry because they are born of the earth and the sun is their father; it is for this reason, says he, that the most fragrant flowers and savory fruits are produced by the richest soils, and those most exposed to the burning sun.

This philosopher bestowed much study upon the writings of Hippocrates, and in medicine possessed a vast amount of knowledge, Diogenes Lærtius attributes to him many works on therapeutics which are lost at the present

day. Many good precepts of practice are scattered here and there throughout his writings; he has also given much useful information upon the uses of medicines.

But however comprehensive the history of nature may be, this undertaking could not satisfy a genius so ardent, so universal, so indefatigable as that of Aristotle. By turn, meditating upon each branch of human knowledge, he seemed to embrace the whole of them in his vast mind. Emerging from the depths of philosophy and metaphysics, he enters upon physics properly so called, zoology, botany and medicine. To him was reserved the honor of shedding light upon a crowd of points entirely unknown to his first studies, and of imposing upon human reason, as upon the sciences, belles-lettres and the arts, a code of precepts eternal and imperishable. Thus it is he wrote upon politics, from which he deduced general principles, by comparing the one with the other, the constitutions of all the governments known at that epoch. In his work on poetry, he, for the first time, established the theory of the arts, as reducible to the single principle, the imitation of nature, and fixed the true rule of taste, from the writings of Homer, the chefs d'œuvres of tragedy among the Greeks, and from the best works of cotemporary poets. His rhetoric contains (upon every species of literature,) the most luminous views, the truest ideas, and there it is we find the germ of all, that has ever since been written upon belles-lettres and the arts. In his logic, he directs the march, the advance of reasoning, marks out for it a sure path, and pursues sophistry even in its most specious windings. His moral philosophy presents an analysis full of subtlety and of sagacity, of all the thoughts peculiar to the human mind, every virtue, every vice; in a word, in the sciences he amassed an incalculable treasure of facts and observations, laid the foundation of the animal kingdom and comparative anatomy, and extended and perfected physics; in philosophy he created logic, proclaimed

the principle of human knowledge, established the theory of the arts, shed light upon politics and moral philosophy, and everywhere imposed principles which will ever be considered as one of the most brilliant results of the human mind.

The genius which reared monuments so stupendous and so diverse, was assuredly one of the most eminently philosophic that has ever appeared. The most striking characteristic, in fact of the talent of Aristotle, is his faculty of generalization. He observes with care, compares with sagacity, and is constantly seeking to conform isolated facts to points considered in a general view. His style, as remarkable for its clearness and precision as for the abundance of the ideas, bears upon it the impress of this habit of generalization. He never wrote anyting useless. His style is that of an elevated reason, but cold and without enthusiasm. It is simple, exact, correct, and full of information. In it judgment and experience occupy a higher stand than the imagination. Less graceful and refined than that of Plato, less elegant but equally pure with that of Theophrastus, we may regard it as the model of the philosophic style, and of the art of expressing general principles as the most complete details of the science. The destiny of Aristotle, his writings and his school are circumstances worthy of remark. Almost deified during his life, statues were raised to him, and his countrymen instituted in his honor, triumphal fetes. But soon after his death, his doctrines were altered; Theophrastus his pupil and immediate successor was almost the only one, who preserved it in all its purity. Whether other schools and other teachers, favored by their actual existence, had attracted to themselves the entire attention of their contemporaries, or, with their usual fickleness, had grown weary of the success of the peripatetic school, it is certain that the writings of the philosopher of Stagira by degrees fell into a sort of oblivion; up to the

time when the Romans began to interest themselves in philosophy, the world seemed to have entirely lost sight of them, nevertheless his doctrines did not regain their proper stand till the time of the Arabs, who, in the middle ages, introduced them into Europe. From that moment they were espoused far and wide; they penetrated into all nations, they were taught in all the sciences, so much so, that during twenty centuries, in the words of Laharpe "the boundaries of the mind of Aristotle seemed to be also the boundaries of the human mind."

It was not for the mere reason that Aristotle was skilled in pharmacy or practical medicine, that we have bestowed our attention, perhaps too long, upon the life and works of this eminent man, but because, on the one hand, the extent, the variety of his knowledge and of his discoveries would not allow us to speak more briefly, and on the other, it was important, with a view to our subject, to prove that the true origin of the natural sciences may be traced back to the peripatetic school. What Aristotle achieved for zoology, Theophrastus continued for vegetables and in part for the mineral kingdom.

SELECTIONS

FROM

FOREIGN AND HOME MEDICAL JOURNALS.

Results of the Use of Chloroform in 9000 *cases at St. Bartholomew's Hospital.* By Mr. Skey.—One of the most interesting questions connected with the subject of operative surgery relates to the use of anesthetic agents employed for the purpose of suspending the function of sensation. This question has assumed a moral, as well as a medical type. It has been urged, that sensation is a natural function of the living organism, and that to suspend it by artificial agency is to set at nought the ordinances of nature; and that man is born to suffering, as evidenced by the sensibilities of his body. If the soundness of this argument be admitted, it would be difficult to draw a line which would define the boundary at which moral and *immoral* suffering meet; or to say, in what form of suffering our remedial agents may be justifiably resorted to. The sensibilities of our frame are not given us by nature to the end of promoting pain, but to enable us to avoid it. Corporal suffering is no part of the discipline of the mind; nor can it even be generally asserted that its excess exercises a salutary influence on the character. Every movement of our body instinctively points to the avoidance of bodily suffering; why, therefore, should we not as readily and unobjectionably employ the agency of anesthetic medicines for the purpose of suspending bodily pain, under the circumstances of an otherwise painful operation, as we endeavor to mitigate the bodily suffering of any other patient cast down on a bed of sickness? Will not the objection to the anesthetic action of opium to a region affected by a neuralgic pain.

or to the system generally, hold as strongly as that of another agent of the same principle given to avert the pain of an operation?

The medical arguments against the use of anesthetic agents have a somewhat better foundation. That great and sudden determination to the brain, and an unnatural circulation of venous blood, result from their employment, is undeniable.

It is undeniable, if the quantity administered be large, and long continued, that symptoms resembling those of apoplexy present themselves, in the form of extreme congestion of the vessels of the face, stertorous respiration, and total insensibility; and it cannot be denied that occasionally its full administration leads to headache, vertigo, and languor of some days duration; and cases are recorded in which death itself has followed in the course of an hour or more after its employment. It must be observed, however, in pursuing this question in strict accordance with the laws of evidence, that we have no *proof*, in the cases above referred to, that death was the direct effect of the supposed cause. The parties administering it were not fully experienced in the mode of its application. They entertain the *opinion* that death was referable to it, while it cannot be disputed that the fatal issue may be attributable to other causes: and, in one example, it appears more reasonable to refer the death of the individual to a suspension of the function of respiration by violence, than to any obnoxious agent circulating through the lungs, or brain. On the other hand, the records of St. Bartholomew's Hospital point to its successful administration in upwards of 9000 cases; in not one of which, including the aged and the young, the healthy, the infirm and the asthmatic, has its emyloyment left a stain on its character, as an innocuous agent of good. Under all circumstances, its careful employmeut may be unhesitatingly resorted to in all cases, excepting only such as are marked by determination to the brain of an apoplectic type; secondly, under circumstances of great and serious exhaustion from loss of blood; and, thirdly, in diseases of the heart. In these conditions of the system, it is perhaps better avoided.

The agent in general use is chloroform, and one word may be added as to its administration. It appears indis-

putable that its influence on sensation precedes that on consciousness. I have employed it on several occasions, in which a patient has been conscious of all that has been passing around, and yet who has declared himself to have been totally insensible to pain. This state of his system has arisen from the moderate use of the agent, ample, indeed, for all purposes of utility, though somewhat difficult to regulate in quantity sufficient for the required object.

I prefer its gradual administration. I do not think it desirable to exclude atmospheric air, employed as a diluent during the process of inhalation. Its influence should be gradual, not sudden. I consider its application through the medium of a cambric handkerchief laid on the face, preferable to the use of instruments made for the purpose of excluding atmospheric air, and food should be rigidly avoided before its administration, otherwise sickness will frequently follow.

Against the occasional convictions or objections of others to its employment, I place the strong, and to my own mind the unanswerable fact, that it has been successfully used in so large a number of cases in St. Bartholomew's Hospital since the period of its introduction; that these cases have been indiscriminately taken, and that its objections have not yet made their appearance before the observant eyes of the medical staff of that institution, either by promoting danger during the operation, or protracting the recovery of the patient after it. In one class of cases its employment is especially applicable, viz, in that form of disease in which the pain of an operation is the chief warrant for its nonperformance, and in which the recovery from a chronic disease is left to nature, that might be greatly hastened by the hand of art; such, for example, as the removal of a piece of dead bone.

Up to the period of the introduction of chloroform, a surgeon was very unwilling to subject a patient to the painful process of sawing and chipping away portions of dead bone, with a view to reach the medullary cavity, because the operation was both a painful and protracted one. The consequence was, that an hospital bed was occupied by a patient thus affected, for many months, to the exclusion, perhaps, of three or more claimants, who would have successively occupied it. But by the aid of

chloroform the operation is now performed unconsciously to the patient, and the period of his recovery greatly abridged. With the three exceptions above mentioned, I cannot hesitate in strongly recommending its administration in all cases of large surgical operations; believing its discovery to be the greatest blessing conferred on the profession of surgery during the last century; and although I have seen its employment pushed, on many occasions, apparently to the verge of apoplexy, I cannot say, even in such examples, that the good has not largely predominated.—*Operative Surgery.*

Value of a Chemical and Microscopical Examination of the Urine as a means of Diagnosis in Renal Diseases.—Dr. Geo. Johnson makes the following just remarks on this subject in an interesting paper in the *London Journal of Medicine* (Feb. 1851):—

"None," he says, "but those who have paid much attention to the diseases of the kidneys, and to the means of distinguishing one form of disease from another, can form an estimate of the true value of the information to be derived from a chemical and microscopical examination of the urine. It may safely be affirmed, that a microscopical examination of the urine is, in general, as necessary for the formation of a correct opinion in cases of renal disease, as a physical examination of the chest is for the exact diagnosis of diseases within that cavity. To determine the true nature of disease in the kidney, and to form a probably correct judgment as to its course and termination, it is not sufficient merely to ascertain that albumen is present in the urine, that the specific gravity of the secretion is abnormal, and that moulds of the uriniferous tubes may be detected by the microscope. These signs may each and all be present in a given case; but a more precise examination of the circumstances is necessary for the formation of a correct diagnosis. The mere enumeration of these signs, such as is very commonly given in reporting cases of renal disease, will as little enable a practitioner to ascertain the true nature of disease in the kidney, as would a simple report of a patient having cough, with dyspnœa, expec-

toration, and a sound produced by the mixture of air and liquid in the air-tubes, suffice for the exact diagnosis of disease in the lung. In both instances, the signs must be exactly observed, and correctly reported; otherwise no sound opinion can be based upon them.

"It is well known that diseases of the kidneys are amongst the most frequent of those which destroy life, and that some forms of renal disease are curable, while others are almost certainly fatal. In many of the most obvious circumstances, all the forms of renal disease are alike; and it is only by a careful attention to differences, which, however minute, may yet be readily and certainly appreciated, that we can hope to distinguish one disease from another, or to give a confident opinion as to the probable course and termination of a case.

"The microscopical examination of the urine is much facilitated by placing it in a conical glass, which will contain about three or four ounces. The fluid should be allowed to stand for a few hours before examination. I usually put it in the glasses at night, and examine it with the microscope on the following morning. This delay is not necessary if the sediment is abundant; but in many cases, when the sediment is small in quantity, it is quite essential that time should be allowed for its deposition to take place. A small quantity of the lower part of the liquid should then be removed with a pipette, and placed in a shallow cell for microscopical examination."—*Am. Jour. Med. Sci.*

Vaccination as a Preventive of Small-pox.—Dr. Alexander Knox concludes a highly interesting paper on the existing state of our knowledge of vaccination and revaccination as preventive of small-pox (*Lond. Journ. Med.*, Dec. 1850), with the following practical deductions, suggested by a careful reconsideration of the subject, and which are well calculated to reassure confidence in the protective influence of cow-pox.

"1. It appears to have been satisfactorily demonstrated, that secondary vaccinations have succeeded in a considerable proportion of the cases in which they have been resorted to.

2. It also appears that small-pox has prevailed of late years to an increased extent.

3. The results in question have been attributed, partly to a dimution of energy in the vaccine infection, caused by repeated transmission through the human subject, and partly to the alleged tendency of the immunity conferred by cow-pock, to wear out of the system, after an uncertain period from the date of vaccination.

4. Both the success of revaccination, and the increased prevalence of casual small-pox, appear, however, to have been exaggerated in the popular belief; and, at any rate, the facts seem explicable, in a great measure, without resorting to the hypothesis just stated, by attributing them in part to the imperfect performance, or the entire neglect of vaccination; in part to the temporary tendency to increased diffusion, at distant and uncertain periods of time, which characterizes all epidemic diseases; and, finally, to peculiarities of constitution, which render many iudividuals absolutely insusceptible of being protected against a secondary attack, either by vaccination or by inoculated or natural small-pox.

5. It has been proposed to re-introduce variolous inoculation as a certain remedy for the occasional failure of vaccination; but the superior efficacy of the practice is not only questionable, but its indiscriminate employment has been proved to be dangerous, and destructive of human life, and is therefore highly to be deprecated.

6. Revaccination, however, may be prudently recommended, not only as innocuous in itself, but also, on various grounds, as positively advantageous, even by those who question the gradual extinction of the protective influence of cow-pock.

7. It does not appear that genuine vaccination has lost any of the efficacy which at any time really appertained to it; and it still remains to be demonstrated that it is not capable of conferring, to the end of life, complete immunity from the horrors of small-pox, on a large majority of all the individuals fully submitted to its influence.

8. Even where vaccination fails to prevent a secondary attack, the consecutive disease, in general, assumes a mild and modified form, although, in some instances, it may be sufficiently severe to leave the countenance marked with

scars, and still more rarely to terminate in death: but fatal cases from secondary small-pox do not seem to be more frequent after vaccination than after a primary attack of the natural disease.

9. On the whole, it is respectfully maintained that cow-pock, imparted in the most efficient manner of which it is capable, by vaccination, and, under certain circumstances, by revaccination, is the most eligible safeguard within our power against small-pox; and that it will prove effectual in most constitutions, not inherently insusceptible of protection, by any means whatever."—*Ibid.*

On the Treatment of Itch. By MM. Bazin and Bourguignon.—M. Bazin, physician to the St. Louis, in a recent report, furnishes an account of the trials he has made of the various means of treating the itch, and of the definitive results he has arrived at. He states that, at the time of his appointment in 1847, the medium time occupied in treating the disease by the *sulphuro-alkaline ointment* applied to the wrists and insteps, together with sulphureous baths and fumigations, was fourteen days; but that since he has caused the *entire body* to be well rubbed with it (rubbing with extra force those parts the acari specially infest), the patients are dismissed cured in two or three eays. Some practitioners who have adopted the plan have erred in its application by leaving some portions of the body unrubbed, or by continuing the friction as long as any itching was perceived. In the first case the disease reappears; while in the other, by prolonging the frictions beyond the time necessary to destroy the acari, and the vitality of their ova, other eruptions are induced which give rise to great itching. This itching and eruption, occurring after the employment of two complete frictions, furnish an indication to desist instead of to continue; and if they do not then disappear, they may be relieved by tepid baths.

There are cases, however, in which, from the existence of great abundance of pustules, the sulphuro-alkaline ointment would excite too much pain, or in which the patients have such an invincible repugnance to its smell, that we should resort to some other substance; and M.

Bazin finds, by numerous trials, that the *lard* and *oil*, which form the base of all antipsoric preparations, if employed in general frictions, either together or separate, will effect a cure, only from four to six, instead of two, frictions being required. Another ointment recently tried, containing *chamomile*, cures in three frictions, soothes the itching instantly, and does not give rise to any secondary eruption. It is composed of equal parts of fresh chamomile, olive oil, and lard.

M. Bourguignon, in his recent prize essay, prefers the *staphisagria* to any other remedy. He adds 300 parts to 500 of lard, stirring the powder into the boiling lard, and keeping up a temperature of 100° C. for twenty-four hours. After straining, a little essence may be added. Baths should be taken before and during the treatment, and the frictions should be made four times a day, the cure being completed by the fourth day.—*British and Foreign Med. Chirurg. Rev.*, Jan. 1851, from *Am. Journ. Med. Sci.*

Femoral Aneurism cured by Compression.—Mr. Smyly communicated to the Surgical Society of Ireland, November 23, 1850, the following case of femoral aneurism, successfully treated by compression:—

"Patrick O'Gorman, aged 48, a schoolmtster, came under my care in April, 1847, three years and a half ago. He stated that, in August, 1846, eight months before I saw him, when walking at his ordinary gait, he suddenly lost, in a great measure, the use of his right leg, and with great difficulty got on half a mile further. Next day he could not put his foot under him, or leave his bed. He suffered intense pain in the middle of the thigh, in the knee, and down the outside of his leg. It was so severe as to prevent him leaving his bed for a week. It then abated, but has returned occasionally, with more or less severity ever since. He is a married man, sober, and well conducted. He was admitted into the Meath Hospital on the 14th of April, 1847. A pulsating tumour, the size of an egg, having all the characteristics of aneurism, existed in the lower part of the middle third of the right thigh. His general health was good. There

was excitement of the circulation, and a slight bruit de soufflet at the heart. In consultation with my colleague, it was determined to treat this case by compression, so applied as not to interrupt completely the flow of blood in the femoral artery. The patient being bled, and confinement to the recumbent position being strictly enjoined, pressure was made at two different points alternately, by means of two clamps—one applied to the external iliac artery, the other to the femoral. This treatment was persevered in with more or less assiduity for nearly three months, with no other advantage than a diminution in the size of the tumor. Weary of the restraint, he desired to leave the hospital; and as he fully understood the use of the instruments, and the plan to be pursued, he was permitted to go out. He was then appointed schoolmaster to the National School at Blackrock, and continued to fulfil his arduous duties for about three months, when, having walked a distance of two miles, he suddenly felt a severe pain in the tumor, extending down the leg. The pain continued unabated for two days, and then gradually subsided. Seven days after the occurrence of the severe pain, he called upon me. On examining the tumor, all pulsation had ceased. This he found to have taken place two days ago, the contents of the tumor to have become consolidated, and all pain to have disappeared. Three months after the cessation of pulsation, I had an opportunity of examining the patient: the tumor, though diminished in size, was still to be felt about as large as a walnut, and very hard.

"November 15, 1850, I called upon him, and found him in the enjoyment of good health, equal to perform the duties attendant upon the management of a large school. A very small hard tumor is still traceable at the seat of the aneurism, and pain is sometimes felt down the outside of the leg. On examining the heart and large arteries, no morbid sound is audible; they are apparently free from disease."

Reflections.—1st. When we consider the protracted period required to accomplish a cure in this case, we learn not to abandon hopes of a cure when our efforts are baffled, and prove unavailing, even for six months.

2d. We find the excitement of the circulation and the bruit de soufflet to subside and disappear on the cure of

the aneurism just as similar sympathetic affections are relieved when the cure is affected by ligature. This case, then, meets the objection urged against the treatment by compression—viz., that disease of the heart is more likely to attend it than when a ligature is applied; for we see the same beneficial result follow the cure of the aneurism in this as in those cases cured by ligature.—*Dublin Med. Press, December* 11, 1850, from *Am. Jour. Med. Sci.*

Two Cases of Popliteal Aneurism successfully treated by Compression. By James R. Wood, M. D., one of the Surgeons to Bellevue Hospital.—CASE 1. John Morgan, aged thirty, born in Ireland, carpenter, admitted into Bellevue Hospital, December 29th, 1849. He is temperate in his habits, and has enjoyed good health. While at work, twelve months ago, the scaffolding on which he was standing gave way, and he fell to the ground, striking his left leg over the popliteal space on an upright piece of timber. Inflammation and swelling followed, and the part was very painful; under proper treatment, these symptoms disappeared in eight or ten days, leaving a small hard tumor, which has since remained, slowly increasing in size. This tumor is the size of a small orange, is nearly globular in shape, and has a very firm feel. Strong pulsations can be felt when the fingers are placed over it; these pulsations are synchronous with those of the heart, and cease when compression is made on the femoral artery above it; at the same time the tumor diminishes somewhat in size. A faint aneurismal thrill can be heard at times by applying the ear to the part; this ceases with the pulsations. Pulsation and the thrill return, and the tumor regains its size as soon as pressure is removed. Slight pain is sometimes felt in the affected part.

Commenced treatment January 23, 1850, by compression, using alternately Dupuytren's instrument and the thumb. Patient was able to bear the compression twenty-five minutes at the first application; second, thirty; third, thirty-five; the thumb being used in the intervals, which varied from ten minutes to half an hour. Very soon after the instrument was applied, the temperature

of the limb fell two or three degrees, but in the course of three hours the natural heat was restored.

Jan. 24th.—Compression has been constantly kept up since yesterday; patient is able to bear the instrument thirty minutes this morning without much pain; no pulsation felt in the tumor since half-past 3 o'clobk this morning; treatment is borne well; no untoward symptom; pressure slightly moderated.

Jan. 25th.—Treatment continued. Last night, at half-past 11 o'clock, patient complained of pain in his back, and was very restless; pulse sixty-three per minute, and moderately full; tongue clean: functions regularly performed. Ordered sulph. morph. one-sixth of a grain, after which he was in a great measure relieved, and slept three hours; bears treatment much better than yesterday; instrument borne an hour without pain; no pulsation.

Jan. 2 th —Treatment still continued; pressure moderated so as to be borne three hours without inconvenience; leg slightly swollen; still of natural temperature; a branch of one of the internal articular arteries can be felt pulsating on the inner side of the knee. This branch is enlarged, and is the size of or larger than the radial artery. No pulsation has been felt in the anterior or posterior tibial arteries since treatment was commenced.

Jan. 27th,—No change of consequence since yesterday; slight compression borne six hours without pain. Leg not so much swollen as yesterday; small arterial branches can be felt pulsating on both sides of the tumor.

Jan. 31st.—No change since last date of consequence; the tumor has sensibly diminished in size; collateral circulation appears to be growing stronger. The arterial branch inside the knee has increased in size somewhat; the instrument is still kept on to make slight compression.

Feb. 1st.—A graduated compress and roller bandage applied instead of the instrument. The roller was carried from the toes to the thigh. Patient allowed to walk a little.

Feb. 10th.—Compress and roller still kept on; tumor very much diminished in size. The veins of the affected leg are larger than those of the other side. There seems to be some obstruction to the return of blood above the knee. Patient allowed to walk around the ward, and back and forward in the hall adjoining. He has no pain,

but says the knee joint feels a little stiff, and that the foot feels numb sometimes. There is no pulsation yet felt in either of the tibial arteries.

Feb. 20th.—All treatment discontinued except restriction in exercise; tumor nearly absorbed; a vestige merely remaining; veins still continue enlarged, but are not so much so as at last date. The sensation of numbness has almost entirely disappeared.

During the whole treatment the ordinary hospital diet has been allowed in moderate quantities. The appetite has been good, digestion and the other functions have been performed with perfect regularity.

I am indebted to my house-surgeon, Dr. Loving, and Dr. Loines, house-surgeon of the second surgical department, for their assistance in the treatment of this case.

CASE 2.—A—— B——, aged 33, N. Y., carman, intemperate, has had syphilis, for which he was treated with mercurials. He first noticed a small tumor behind the left knee, one month since, accompanied with slight pain, which he attributed to a violent jump. This did not trouble him much, and was almost forgotten, uni l at the end of the week, when another leap, and a slip upon a round stone, were followed by great pain, and steady increase of the swelling, which compelled him to apply for medical relief; the case was readily recognized by his physician, Dr. Leveridge, but on account of the influence of his previous habits upon the nervous system, when he became confined to the house, treatment for the cure of the aneurism was delayed until this day, June 28, 1850. The tumor is at present larger than a goose-egg, the pain is great, shooting down the leg at each pulsation, and constantly enhanced by the excessive edema of the limb below the knee. General health, average; pulse, eighty-eight; respiration, twenty-four.

The plan of cure is, as in the case of Morgan, to interrupt entirely and constantly, the primary current of blood to the aneurism, by the use of Dupuytren's compressor to the middle of thigh, alternating with pressure by the thumb to the artery, at the rami pubis. With this view, pressure by the instrument was first applied at 9 o'clock forty minutes, A. M., and continued thirty minutes, when, on account of the pain caused by it, the circulation was

confined by the thumb at the rami pubis, and the pressure by the instrument taken off twenty minutes, after which it was re-applied, and the assistants so directed to make the alternation for the day; also, to aid the return of blood by friction with the hand, when pressure by the instrument should be taken off, and the patient rendered more comfortable by keeping the leg flexed.

In a few minutes after the circulation was thus cut off, the leg and foot became cold, but the heat soon returned to the upper part of the leg, and the superficial veins soon became enlarged, but gradually diminished in size. 9 P. M., same day. Pressure has been steadily kept up as directed, more than eleven hours, at about the same alternations; about five hours since, the patient suddenly complained of excruciating pain in the knee and leg for a few minutes; and in the course of an hour from that time, pulsation could be felt in one of the internal articular arteries. The tumor is now hard and incompressible, and upon removing all pressure from the femoral artery no pulsation can be perceived in it; notwithstanding this, pressure directed to be continued, with somewhat less severity, in the same manner during the night, the leg to be enveloped in cotton, and an anodyne administered.

June 29th.—10, A. M. Pressure has been steadily continued; patient showed some symptoms of mania a potu. There is no pulsation in the tumor, although it can be felt in the artery to within an inch of the aneurism; the leg is still cold; pressure continued. June 30th, 9 A. M. Lighter pressure has been continued in the same way, and the paiient now bears the instrument two hours at a time; the natural warmth has returned to the whole limb; anodynes are still administered at night; pressure to be continued. July 1st. All going on well; edema of the limb is subsiding, making the tumor more definable. July 2d. Same note as yesterday; pressure is needed to be maintained so slightly, that the instrument is continued three or four hours in one place, and then a little up or down the thigh; the application of the thumb has not been needed since last night. July 4th. All going on well; up to this time an assistant has remained constantly with the patient; but now it is considered unnecessary for the attendance of an assistant; no pulsation can be felt in the femoral artery below the tendinous arcade of

the triceps. July 6th. All going on well; the instrument is still kept on to confine the patient to the bed.

July 20th.—Absorption is going on in the tumor, the edema is subsiding;—patient is recovering the use of the limb, and he is allowed to sit up and move about on crutches. The whole limb is bandaged, and graduated compresses are applied along the course of the femoral artery. Pulsation can be felt in numerous small vessels around the knee, but it may be worthy of noting here that at no time since the patient has been under treatment could pulsation be detected in either of the tibial arteries.—*New York Jour. of Med.*

Treatment of Abscesses connected with Caries of Bone.—The Surgical Society of Paris has been lately occupied with the discussion of a peculiar treatment of what the French surgeons call congestive abscess, excited by caries of bone. M. Boinet, who read a paper on the subject, proposes to evacuate the abscess as completely as possible, and to inject immediatly pure tincture of iodide. But when the sac is large, and for the first injection, he prefers adding equal parts of water to the tincture, and one drachm of iodide of potassium for every three ounces of the same. The addition of the salt is intended to facilitate the diffusion of the tincture. The author adds, that the general treatment should not be omitted, and advises the use of good diet, preparations of iron, iodide of iron, cod-liver oil, &c.

He brings forward four cases of cure where the abscess was situated in different parts of the body. The first case refers to a man, thirty-four years of age, who had been treated for five years for abscess connected with caries of the hip-joint; the latter affection was cured in eight months by M. Boinet's method. The second is that of a lady, thirty-eight years of age, who was cured of caries of the sacrum and abscess after eight injections. The third, a girl of twenty-one, suffering from caries of the third, fourth, and fifth cervical vertebræ; and the fourth, a child nine years of age, affected with caries and curvature of the spine, whose abscess contained more than a quart and a half of pus. The child was cured after five

injections, and her health, which was much deteriorated, has improved remarkably since the operation. M. Boinet insists principally on the fact that his injections, besides modifying the walls of the sac, act directly upon the diseased bone, and that they prevent the absorption of the pus, whether the latter was putrid by the admission of air, or unaltered.

The Surgical Society discussed the subject with great animation; the majority of the members were very far from completely approving of the plan, and the general feeling was, that a great many more and varied trials must be made before this treatment can be entitled to any credit. It will certainly be worth while to give these injections a fair trial in this country; for the results of the usual treatment of caries and abscess are so uncertian, that it would be a great boon if M. Boinet's somewhat sanguine expectations became realized.—*Lon. Lancet.*

Medical Society of London.—Mr. Thomas H. Wakely exhibited a set of *New Instruments for the cure of stricture.* Mr. Wakely said that he should have preferred sending a paper with the instruments, giving a full description of them, and the details of a few cases in which they have been used, but he had been informed that the "list of papers" for the remainder of the session was full. He therefore availed himself of the opportunity thus afforded by the regulations of the Society for submitting the instruments to their consideration at that time. He remarked, that the subject of the treatment of stricture of urethra had been much discussed within the last year or two, and had given rise to a great deal of controversy. It certainly was not a settled question what should be done in cases of severe permanent stricture. Mr. Syme, the distinguished surgeon of Edinburgh, had, as was known, recommended, where the ordinary means of treatment had failed, the division of such strictures by perinæal section. Probably, the instruments which he then had the honor of bringing before the notice of the Society would, in some cases at least, render such an operation unnecessary. He had used them in several cases already with very satisfactory results. The instruments he at first

used were by no means of a refined or perfect manufacture, yet the advantages obtained were of a decided character. The instruments he now produced had been manufactured by Messrs. Weiss & Co., and, as might be expected, they were very perfectly executed. They consist of—

1. A catheter, thirteen inches in length, of a very small size, slightly curved at the extremity; the stem quite straight, and having at the end a worm, for the reception of the screw of the directing rod.

2. A small thumb-slide, (removable at pleasure,) screwing closely upon, and acting as a handle to, the catheter.

3. A steel rod, which passes into the catheter as far as the screw, at which part both are united by two or three turns of the rod. The rod makes an addition of five inches to the length of the catheter. The rod and catheter combined form the index-rod, or director, for the metallic and elastic tubes.

4. Of the silver straight tubes, there are nine of graduated sizes; the first is only one size larger than the index-rod, and the others regularly increase in circumference; the last, or No. 10, corresponding with that number of the ordinary bougie. These tubes are all of a conical shape at there distal extremities, and are so constructed as to fit the mouth of each tube with extreme exactness at the surface of the index-rod. They thus slide with the most perfect ease along that guide, and being directed by it, if the rod be in its proper situation, the tubes cannot take a wrong course or make a false passage, but must pass through the stricture.

5. There are also three *elastic tubes*, composed of a flexible metal, covered with elastic-gum fabrics. This combination gives to the instrument very considerable strength, without rendering it clumsy or bulky. The extremity of each of these flexible tubes has the same form as that of the silver tubes, and fits with perfect accuracy the surface of the index-rod.

Supposing, then, that a patient having stricture of the urethra is before the surgeon for operation, the mode of proceeding is as follows :—

First, introduce the catheter, as gently and with as much care as possible, completely through the contracted

part of the urethra into the bladder. Having done this, withdraw the stylet, and the surgeon having satisfied himself, by the escape of urine, that the instrument is in the bladder, insert the smaller extremity of the steel rod into the catheter, and having secured it, by making two or three turns of the rod, remove the thum-slide, and then pass No. 3 silver tube upon the index-rod right through the stricture or strictures. In performing this operation, the passage of the instrument will be much facilitated by giving to the flanges a rotatory motion as they are held between the fingers and thumb. This tube being withdrawn, the others may all be passed in a similar manner, and in regular succession. The number to be introduced must of course be determined by the operator. After the last metallic tube is withdrawn, an important object is still to be secured—that of *keeping the command of a free urethra.* How is that to be done? This certainly is a point of considerable importance. Mr. Wakely stated that he was happy to say that it might be accomplished with the greatest ease, by passing of the *elastic tubes* over the index-rod, as done in the case of the silver tubes. One of the flexible tubes being now in the bladder, *the index-rod is to be withdrawn through it;* this may be done with the most perfect ease and facility. The *flexible tube* may be left in the bladder, to serve the purpose of a catheter, and also to afford a safe channel or guide for the re-introduction of the silver catheter or index-rod.

The Society would not fail to perceive that the action of these instruments was safe and simple, and he had the pleasure of stating that the use of them had given him very great satisfaction. The application of the knife for the relief of strictures had been much condemned, although it had been strongly advocated by Mr. Syme, who was undoubtedly a high authority. Still he (Mr. Wakely) could not refrain from expressing a belief that there were strictures which might be removed by the instruments now before him, although Mr. Syme might consider that in such cases the perinæal section would be absolutely necessary to effeet a cure. Time and experience in the trial of both plans would be required to enable a decision to be formed as to their merits. Mr. Syme had remarked, in a letter published that day, that he had endeavored to establish two positions: "First, that the division of a

stricture by external incision, upon a grooved director, passed fairly through the contracted part, is an operation free from all ordinary sources of danger. Secondly: that by this procedure, strictures which resist every other mode of treatment, and are apt to resent seriously even the gentlest use of simple bougies, may be speedily removed, so as to allow instruments of the largest size to be introduced without difficulty or inconvenience." The first proposition demanded particular attention, because he thought that the plan of treatment now proposed, by tubular expansion, would in many cases of stricture contemplated by Mr. Syme, render the perinæal section unnecessary. If the grooved director mentioned by Mr. Syme could be "passed fairly through the contracted part," of course the small-sized catheter or index-rod now shown could also be guided through the stricture into the bladder. Necessarily, if the one instrument could be passed, so could the other; and the passage being thus secured, the tubes, both metalic and flexible, might be made to take the same course, without the slightest danger of making a false passage. In some very obstinate and inveterate strictures he had succeeded in affording relief, almost without difficulty. Some of the strictures appeared to be of the worst possible form. He was glad to perceive some gentlemen in the room who had been present when the instruments were used at the hospital. Amongst them he observed his colleague Mr. Gay, who could acquaint the Society with the result of the treatment as pursued in the case of one of his patients. In that instance the man had been treated in the ordinary way, but without success. It was suggested that it was a case which would effectually test the efficiency of the new treatment. The rod and the tubes were introduced in the presence of Mr. Guthrie and several other gentlemen. After Mr. Gay had very cleverly, but not without some difficulty, introduced a No. 2 catheter, the metallic tubes from No. 3 to No. 9 were passed without a check. No. 8 elastic tube was then passed on the directing catheter, and the latter instrument withdrawn, leaving the elastic tube in the bladder. He might appeal to Mr. Gay as to the accuracy of the statement. Mr. Wakely believed that in the hands of others the effects produced by the instruments would prove as satisfactory as they

had been to himself. At the hospital with which he was connected, the opportunities for proving their utility were very frequent, and it would afford him pleasure to show any practitioner who might honor that institution with a visit, the manner in which they were employed. The instruments had been seen by Sir B. Brodie, Mr. Guthrie, Mr. Stanly, Mr. Fergusson, and other distinguished surgeons, who all approved of the principles of treatment which their use involved. In placing the instruments before the Society and the proffession, he felt confident that they would receive a fair and candid trial. On a future oocasion he should take an opportunity of offering to the notice of the Society the further result of the treatment.

Pathological Society of London.—Mr. Canton exhibited three specimens of *Chronic Rheumatic Arthritis of the Knee-joint.* The first was removed from an elderly woman, who for some time had suffered from the symptoms characterizing this complaint. The outer condyle of the femur presented a series of vertically disposed ridges and furrows alternately arranged. The posterior surface of the patella showed the same peculiarity, so that when the two were in opposition, an inter-locking was the result, but at the same time ginglymoid motion was freely executed. The encrusting cartilage had disappeared from both these surfaces, and porcellaneous material occupied its place. The second specimen was from a man of sixty years of age, and showed the same peculiarities, with the exception of the establishment of surfaces of eburnation to a less degree, though the cartilage had been absorbed to the like extent; the subjacent bone was in part porous, and in part porcellaneous; a loose cartilage was found in this joint, of an oval form, and situated near the intercondyloid notch. The third articulation was from a middle-aged man, who had long labored under the symptoms of chronic rheumatic arthritis in the knee and hip of the same side. In the latter joint the disease had committed extensive ravages. In the ligamentous tissues, larger and small irregularly shaped osseous growths were to be seen; and around the tibial

glenoid cavities similiar deposits had considerably deepened the surface for the femoral condyles. The external semilunar cartilage was wholly removed, so that the femur and tibia were here in contact. Their opposed surfaces were much expanded, and covered by a continuous and uneven stratum of ivory-like deposit. A large number of loose and adherent bodies were in the joint, and varied in consistence from the cartilaginous to the osseous.

Mr. Prescott Hewett exhibited a specimen of *omental sac in a scrotal hernia*, and remarked, that he had great pleasure in being able to bring it before the Society, as it served to confirm the accuracy of the opinion, which he had ventured to express in a paper published some years back, in the *Medico-Chirurgical Transactions*. In speaking of the formation of complete omental sacs in hernia, he had thus decribed the origin of one variety of this disease :—

"An epiplocele takes place, and the portion of omentum which is protruded becomes altered in structure, and its folds are firmly united to each other by the effusion of lymph ; but within the abdominal cavity, in the neighborhood of the ring, the folds into which the omentum has been drawn may not be agglutinated—they will thus leave spaces into which a knuckle of intestine may insinuate itself, pass through the ring, and form for itself a bed in the altered mass of omentum which is in the hernial sac. It may happen that two or three portions of gut may slip into the different spaces left between the folds of the omentum, and subsequently form for themselves separate pouches ; several separate sacs, with narrow necks, may be thus found in the omental mass which is in the hernial sac." When that paper was written, Mr. Prescott Hewett had not yet met with any case of this peculiar form of omental sac, neither had he been able to find any published notice of it ; the present specimen he found by chance, some two or three years subsequently, in the body of a person who had died of some other disease. In this specimen, the omentum in the hernial sac was of the shape and size of a common pear; it was intimately united throughout to the hernial sac; and the greater portion of it, very much thickened, formed a perfectly

solid mass; but close to the external ring, and in the inguinal canal, it was only slightly thickened and drawn into folds, in the centre of which was a well-formed pouch, large enough to lodge a good-sized coil of intestine. One extremity of the pouch reached a little lower than the external ring; the other was in the belly, and about an inch higher up than the internal ring; at this entrance into the pouch, the various folds into which the omentum was drawn had become united to each other by their margins only, and thus formed a complete ring, the circumference of which was very firm in texture, and the size about that of the middle finger; above this ring the omentum was quite healthy in structure. Such a case as this might, it was very evident, become extremely perplexing to the snrgeon. In this patient, a convolution of intestine dropping into the pouch thus formed in the omentum, might have become strangulated by the adventitious ring, and the surgeou cutting down upon the hernia in the scrotum would there have formed simply a solid mass of omentum; and had he not proceeded to examine the parts in the neighborhood of the external ring, he would never have discovered the bowel in the omental sac. Even supposing that he had discoveaed this sac, to relieve the strangulation, he would have been obliged to have laid the whole of the inguinal canal freely open, and to have got into the abdomen to divide the neck of the sac, which was an inch higher up than the internal ring, and which might have been the sole cause of the stricture.

Rheumatic Fever treated by Acetate of Potash.—(Under the care of Dr. Golding Bird.) One of the acute diseases which the hospital physician is most frequently called upon to treat is rheumatic fever; we have ample opportunities of seeing this fact verified, and have taken advantage of that circumstance to observe the methods of treatment which are employed in the hospitals of London against this very common affection. If our readers will refer to previous *Lancets.* they will find acute rheumatism treated with colchicum, acetate and nitrate of potash, and lemon-juice respectively. We now beg their attention for a few moments, whilst we give an outline of Dr. Golding

Bird's treatment of rheumatic fever with acetate of potash alone. It is of course understood that the generality of physicians abstract blood, either generally or locally, and give mercury, when symptoms of pericarditis become manifest, these measures being adopted independently of the peculiar line of treatmedt.

No one will be surprised when we state that we were pecnliarly interested in the progress of the cases for which Dr. Bird prescribed acetate of potash; for his lectures, delivered in 1848 at the College of Physicians, had taught the profession *why* the duretic salt above mentioned might be useful in rheumatism. (Lectures on the Influence of Researches in Organic Chemistry on Therapeutics, in Relation to the depuration of the Blood, *Medical Gazette*, 1848, vols. I. and II.) Dr. Golding Bird, after giving a detail of the solid matters found in the urine whilst the functions are in a normal state, adds: "but we also know that the researches of Wohler have shown us something more—viz,, that whatever substances exist dissolved in the blood not necessary or fit for the repair of the structure of our frame, invariably escape from the body by the kidneys. The injection of saline bodies, coloring matter, &c., readily proves Wohler's statement." The lecturer mentions, a little further on, that the septic agents do not re-appear in their original form, but that they undergo metamorphosis; and proceeds in these terms:—"Can we at will by therapeutic agents produce this depurating effect, and by hastening the metamorphosis of matter, aid the removal of a *materies morbi*, whether itself the exciting cause or effect of antecedent morbid action?"

Before we state which are the *therapeutic agents* most likely thus to depurate the blood, we should mention what efficacy Dr. Bird ascribes to the increase in the secretion of the the kidneys:—"It will be found that the increase of water does not escape alone, but there is really washed away with it a certain although not very large quantity of solid debris." "This is a key to the cures effected by mineral springs." "I would press upon the practitioner the importance of directing his attention to diuretics, not as merely helping the pumping off of the water, but as *renal alteratives*, as remedies aiding the removal from the body of injurious matter." The diuretic to which Dr.

Golding Bird gives the preference for removing the *materies morbi* in rheumatism is acetate of potash; it appears that this agent has been extensively used by Dr. Bird. We shall just give the outline of two cases, the progress of which we very lately watched with great care.

Case 1.—Notes taken by Mr. G. Evans, clinical clerk. Jane P., aged sixteen years, a girl, of sanguineous temperament, following the occupation of nursery-maid, was admitted under the care of Dr. Golding Bird, on December 18, 1850. The patient's parents and sisters reside in Gloucestershire, and all enjoy good health; she states that while in service (which she left the evening before admission) she slept in a kitchen underground, this place being, according to her statement, tolerably dry, but deficient in cleanlinss. Her health had always been good up to a fortnight before she came into the hospital, when she was attacked with dull, aching pain in her right ankle; the joint became stiff and swollen, and the knee was soon similarly effected in spite of the treatment devised by her *mistress*. She was at length placed under medical care, but the malady made rapid progress, and had soon invaded the left ankle and knee, as well as the shoulders.

She was thus laboring under inflammation of the principal joints when admitted, at which period she presented the following symptoms:—skin hot and dry; tongue slightly furred; pulse quick and full, and slight headache. The wrists, knees, and ankles, swollen, stiff, and painful, and yielding a dry, rubbing sound on being moved. Bowels and catamenia regular; appetite tolerable; sleep very indifferent. Dr. Bird ordered twenty-five grains of acetate of potash to be taken every fourth hour in camphor mixture, and eight grains of Dover's powder at night. The patient was much better on the third day; she moved her wrists with facility, and without pain; the skin had become moist; she slept better; the bowels acted once a day, and the appetite was improved. Pulse the same as before, and tongue more furred. The medicine was continued, and on the seventh day the ankles were free from pain, though the arms became somewhat stiff and swollen; all the other symptoms improving.

On the fourteenth day, the pulse was natural, and the patient quite free from pain in any joint, the appetite

was very much improved: and to each dose of the acetate of potash hitherto regularly taken every fourth hour, four grains of ammonio-citrate of iron were added, and the girl was desired to get up for two or three hours a day. The latter injunction was carried out to a greater extent than had been prescribed, and the consequence was a slight relapse on the seventeenth day; this, however, soon gave way, and on the twenty-first day the patient was discharged quite well.

Case 2.—Notes taken by Mr. G. Puckle, clinical clerk. Ellen G., aged twenty-nine years, a married woman, who has had one child, and is between three and four months advanced in pregnancy, was admitted under the care of Dr. Golding Bird, Dec. 18, 1850. (It will be perceived that both patients, in Cases 1 and 2, were admitted on the same day, and as they lay in the same ward, it was very interesting to watch the effect of the acetate of potash upon these patients.) This woman is a native of Ireland, of florid complexion, irritable and sanguineous temperament; she has usually enjoyed good health, and is affected with rheumatism for the first time. Five days before her coming into the hospital, the patient got very wet, and the same evening the right wrist became painful and swollen, the next day the knee, and subsequently the shoulder of the same side became similarly affected.

On admission, the right shoulder, wrist, and knee, were exquisitely tender, as well as swollen and painful; the cheeks were flushed; there was headach, and sour-smelling perspiration; tongue covered with a dirty-white fur, and red at the tip and edges; pulse quick, full and bounding; urine turbid and acid, great restlessness, and no sleep for several nights. Dr. Bird ordered half a drachm of acetate of potash to be taken every fourth hour, in camphor mixture; and ten grains of Dover's powder at night. The doses were somewhat larger than in the preceding case, both probably on account of the difference of age and the severity of the symptoms. As the joints were exquisitely tender, soda poultices (the ordinary linseed poultice, made with a solution of carbonate of soda, instead of plain water) were applied to the affected articulations. On the third day, the patient was considerably relieved. the bowels were, however, confined. Calomel and colocynth were ordered, and the acetate continued

The improvement was steady and gradual; and on the sixteenth day all the joints were well, with the exception of a little stiffness about the shoulder. The patient then took two grains of sulphate of quinine three times a day, and was soon quite well. The urine was in both cases considerably increased in quantity.

It will now be necessary to inquire for what reason Dr. Bird prefers the acetate of potash to other diuretics. If we turn to the above-mentioned Lectures, we find the following explanation:—

"Squill, copaiba, broom, juniper, &c., merely increase the fluids, and are useful in dropsy." "Remedies which exert no chemical action on organic matter out of the body, appear to be incapable of augmenting the quantity of solids in the urine, and hence are of use only in the elimination of water; they may and do act as renal hydragogues, but not as renal depurants." "We have next to notice those remedies among the reputed diuretics which increase the metamorphosis of tissue, and act as *depurating agents*. This class includes the alkalies, their carbonates, and their salts, with such acids as in the animal economy are capable of being converted into carbonic acid, including the acetates, tartrates, and citrates of soda and potash. These remedies act all alike—they all actively stimulate the functions of the kidneys, and increase the bulk of urine; but they do more—they actually increase the metamorphosis of tissue by, in all probability, a direct chemical action on the elements of worn-out and exhausted tissue or other matter in the capillary laboratory of the body."

As to nitrate of potash, Dr. Bird has found it inferior to the acetate of the same alkali. He has used the latter with much advantage, as he finds that "the quantity of fluid removed from the body by the nitrate of potash is far less than that which is carried off under the solvent influence of those agents which act more energetically on animal matter."

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UNIVERSITY OF LOUISVILLE.

Professor Eve has resigned the chair of Surgery in the University of Louisville and it is again filled by Professor Gross. In making this announcement, we scarcely know whether we experience most pleasure or pain. It is pleasant to welcome back an able, well-tried, and faithful colleague; it is painful to part with one who, though known for a shorter time, has been known long enough to have proved himself possessed of all the qualitiees that could be desired in a friend. Dr. Eve and Dr. Gross are both teachers of rare abilities—most acceptable to their pupils, accredited by the profession as among the first surgeons in our country—and with either of them we need hardly say, the school would do well. It is but simple justice to Dr. Eve to state, that he resigned the place in favor of Dr. Gross. He was pleased with the institution, with his colleagues, with his class—pleased with Louisville and Kentucky, and would have remained in the school if Dr. Gross had been content to remain in New York; but on receiving his appointment, last autumn, he expressed a determination not to continue in the chair if Dr. Gross should wish to return to it in the spring, and this resolution he has carried into effect. In doing so he felt that he was making a sacrifice. He had given up his professorship in the Medical College of Georgia and is now without

a place, but he conceived that Dr. Gross had higher claims to the chair and he relinquished it cheerfully in his behalf. Such acts of disinterestedness are not exhibited so often that the world is apt to pass by them unobserved, and Dr. Eve is not likely, with all his fine capacities as a teacher and his amiable social qualities, to remain long unemployed.

The return of Dr. Gross to the school will be highly gratifying to that large body of its alumni who have listened to his lectures, and, under the circumstances, must inspire renewed confidence in its stability and permanent success. We should be glad if, for a good space, we might be spared the trouble of recording any other changes in the institution. Few things try the prosperity of a medical school more seriously than ceaseless rotation among its officers. It may be well enough in politics, but science demands something more fixed, stable, and certain.

Y.

AN IMPROVED MICROSCOPE.

The difficulties inherent in the most approved microscopes of English and French manufacture have been frequently felt by all who have used those instruments, whether manufactured by Ross, Pritchard, Oberhauser, Nachel, or Chevalier. During the past winter, Professor Silliman informed us of an American invention which promised the removal of the difficulties to which we refer. We have recently enjoyed a pleasant and instructive intercourse with the distinguished inventor of this improved microscope—Dr. J. Lawrence Smith, and we have found the instrument all that can be desired. For the prosecution of microscopic investigations of any kind, but especially of a chemical or geological character, Dr. Smith's microscope excels any one we have seen, and must command the confidence of all who pay any attention to microscopic studies.

In the absence of drawings it is difficult to describe an instrument in such a way as to make its character properly understood. But we feel so much the importance of microscopic researches, as aids to pathology and as indicæ to therapeutics, and are impressed so fully with the value of Dr. Smith's invention, that we shall endeavor to describe the advantages of that invention.

The peculiarities of Dr. Smith's microscope consist in having the object placed above the objective glass, instead of beneath it, and the ray

of light passing into the objective is deflected 150° before it reaches the eye. The deflection is accomplished with the aid of a single prism with two reflecting surfaces. The occular extremity and the stage of the microscope are so placed that they both come beneath the eye, and can be regarded almost at one and the same time.

The advantages offered by this arrangement are best seen where manipulations are required, either of a chemical or electrical character.

The stage of the microscope is perfectly unembarrassed, and is so situated with reference to the eye, that the operator is enabled to work with the greatest facility, without interfering in the least with his observations in the instrument.

Even for general purposes this microscope is superior to the microscopes commonly in use, and this could be readily understood on seeing the instrument, or a drawing of it. The most persistent use of Dr. Smith's instrument gives no fatigue to the observer. We may examine an object microscopically, and watch the effect of heat, or of electricity upon it, all at the same time, and vapor, so detrimental to microscopic observation in other instruments, does no harm in this.

Combined with this microscope is a method for measuring the dimensions of objects and the angles of crystals, that is more simple and accurate than any yet known, and this method can be adapted to the instruments in common use. Nachel of Paris has already applied this method to several instruments of his mounting. Our friend Dr. Clapp, of New Albany, the distinguished cultivator of natural science, examined Dr. Smith's invention a few days since, and speaks in the warmest terms of admiration of its excellence. The method of measuring the dimensions of objects, and the angles of crystals, impressed Dr. Clapp very favorably. A detailed description of Dr. Smith's instrument, with drawings, will be published shortly.

We have enjoyed many opportunities of using Dr. S's instrument, in the course of a series of chemical analyses, of urinary calculi, conducted by Dr. Smith, and we speak understandingly, when we say that it is far superior to those known as Oberhauser's or Nachel's. Dr. Smith is one of the most thoroughly qualified gentlemen in chemical knowledge that we know, and the readers of this Journal will be pleased to learn, that he has promised us a paper on Urinary Calculi. It cannot fail to be an interesting one. B.

CARBONAGOGUE MEDICATION.

The monograph on this subject in the present number of this *Journal*, from the pen of Professor L. Rogers, will arrest the attention of readers, and will richly repay perusal and study. The various questions belonging to the theme—carbonagogue medication are handled by Dr. Rogers with a great deal of skillful power, and few can rise from the study of the paper, without a feeling of substantial benefit. The path of investigation, on which Dr. Rogers started, could not fail, under his method of travelling, to lead to results eminently practical and useful, and the practitioner who may apply the principles set forth by Dr. Rogers will find a gratifying success

We have rarely read anything in medical literature, of a practical character, that gave us the same degree of satisfaction, that we have derived from the perusal of this paper on "carbonagogue medication." As a contribution to therapeutical science, we know nothing superior to it. We have often verified in practice the truths set forth by Dr. Rogers, and the investigations, and subjects for observation indicated by him, open a wide range, in which a properly constituted mind may reap a rich harvest of reputation. B.

DR. E. D. FENNER.

We regret very much that we fell into the singular error, in our April number, of calling Dr. Fenner, Editor of Southern Medical Reports, Dr. Fenton. In the essay on "Epidemic Influences," Dr. Fenner is invariably called Dr. Fenton. We know how the mistake was made, but we cannot see how it escaped detection for the length of time it passed unnoticed. We are consoled, however, with the reflection that it is more easy to rob Dr. Fenner of his name, than of his reputation.

B.

PROFESSOR SILLIMAN.

We mentioned, in a former number, that Professor Silliman was traveling in Europe for professional improvement. At our last dates he was in Marseilles. He is expected to return early in October. While abroad he will make purchases for the medical deparement of the University of Louisville.

CLINICAL LECTURES.

Dr. D. W. Yandell has commenced a course of Clinical Lectures at the Louisville Marine Hospital, to which we would call the attention of medical students.

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